Using Classroom-Level Positive Behavior Intervention Supports in High School Science Classes

by

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Abstract

Disciplinary data revealed racial disparities for addressing discipline issues with Black students receiving suspensions and expulsions at a rate 3 times higher than Whites (U.S. Department of Education Office of Civil Rights, 2014). Within the context of a suburban high school located in Alabama, the problem concerning suspensions and expulsions exceed other high schools within the district. These exclusionary actions occurred as a result of teachers writing disciplinary referrals for defiance of authority and disruptive classroom behaviors. Needs assessment results revealed that teachers were struggling to manage misbehaviors in classes due to gender differences and large class sizes. Teachers agreed that they needed additional classroom management professional development. Results also showed a statistically significant negative correlation between suspensions and students' academic performance. To address these issues, Science teachers participated in a 6 weeks intervention in which they implemented classroom-level positive behavior intervention supports (PBIS). The ultimate goal of the intervention was to reduce the frequency of disruptive classroom behaviors and defiance of authority. Results showed that after implementing classroom-level PBIS, there was a reduction in the frequency of disruptive classroom behaviors such as inappropriate vocalization, argumentative behavior, dress code violations, cell phone violations, and students getting out of their assigned seats without permission. Students in science classes showed a reduction in tardies, improved compliance with authority, and a statistically significant difference in the students' level of educational engagement. Student data did not reveal any improvements in school climate; however, science teachers reported improvements in classroom climate. Science teachers also increased

their use of reward classroom management strategies and acknowledged students more for their academic performance and academic engagement. Science teachers also reported writing fewer disciplinary referrals, and they would recommend PBIS to other teachers. Only one science teacher had an increase in academic performance. In conclusion, implementing classroom-level PBIS showed improvements for students' educational engagement, attendance, and disruptive classroom behaviors; while showing an increase in teachers' use of reward strategies and a decrease in disciplinary referrals written.

Keywords: Classroom-Level Positive Behavior Intervention Supports (PBIS), classroom management, disruptive classroom behaviors, educational engagement, school climate

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Dedication

To my loving husband, Willie Edward Scott, Jr.: Thank you for your unwavering support of my academic endeavors over the past three years. You listened to all of my ideas, and you sacrificed a lot of our time together to ensure that I was successful in this program. When I was weary, you prayed for me and motivated me to succeed. Your love and support is greatly appreciated.

To my son, Weston Parker Scott: Your birth this year was the motivation that I needed to finish this degree. I hope that this degree inspires you to value education.

To my mother, Joanne Knott: Thank you for all of the love and support that you have given me my entire life. At an early age, you emphasized the significance of obtaining an education. You always motivated me to excel academically which inspired me to obtain this terminal degree. When I was discouraged, you encouraged me. I am forever grateful for all of the sacrifices that you have made for me over the years. Know that your sacrifices were worth it. I hope that I make you proud.

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Executive Summary

National, state, and district-level disciplinary data revealed racial and gender disparities for addressing disciplinary issues. Nationally, Black students were suspended and expelled at a rate 3 times higher than Whites (U.S. Department of Education Office of Civil Rights, 2014). More specifically, only 5% of White students received suspensions from school while 16% of Black students received suspensions (U.S. Department of Education Office of Civil Rights, 2014). In addition to a disparity with suspensions, there were also discrepancies when reviewing the data for student referrals to law enforcement; more Black students were referred than Whites (U.S. Department of Education Office of Civil Rights, 2014). In addition, data revealed that boys received two out of three total suspensions, and Black girls were suspended at higher rates than girls and boys of other ethnic decent (U.S. Department of Education Office of Civil Rights, 2014). Similar to national data, Black male and female students in Alabama also had higher out-of-school suspension rates in comparison to other racial groups (U.S. Department of Education Office of Civil Rights, 2014). On a district level, when Excellence High School (pseudonym) was compared to the other 58 schools within the Green-Leaf County School System (pseudonym), more students received class 3 disciplinary infractions that results in suspensions and expulsions (K. Eaton, personal communication, January 29, 2016). These disciplinary actions taken by administrators were due to disciplinary referrals written by teachers. Most of the disciplinary referrals written were for students who exhibited disruptive classroom behaviors and defiance of authority. Whenever students received a disciplinary action that resulted in a suspension

or expulsion, their academic performance was affected. This was evident when reviewing academic data for Excellence High School.

When comparing academic performance for high schools in Green-Leaf County, student achievement averages were also lower. The academic performance data was also consistent on a state level. For example, the American College Test (ACT) data results from 2011 to 2015 showed that the graduates of Excellence High School performed below Alabama's state average in every core subject including mathematics, science, reading, and English (L. Akin, personal communication, January 29, 2016). In addition, ACT Plan test score data from the 2013 to 2014 academic school year indicated that Excellence High School students scored below the district and state averages in reading and mathematics (*US News and World Report*, 2016). Overall there was a problem with student behavior that contributed to higher rates of referrals, higher rates of suspensions and expulsions, and lower academic achievement that needed to be addressed within the professional context.

Context

Excellence High School was one of 13 high schools located in a suburb in the Green-Leaf County School district in Alabama. The school primarily serviced minority students from backgrounds of poverty. For example, the student body consisted of 85% African American, 12% White, 2% Hispanic, 1% two or more races, 0.2% Asian, and 0.1% Hawaiian Native or Pacific Islander (*US News and World Report*, 2016). The student population consisted of 55% male and 45% female students (*US News and World Report*, 2016). Of these students, 60% received free lunch and 9% of the students qualified for reduced priced lunch which indicated that 69% of the study body was

classified as economically disadvantaged (*US News and World Report*, 2016). The issues concerning racial and gender disparities for suspensions and expulsions and poor academic performance were observed on a classroom-level within this context.

While completing classroom observations, several disruptive behaviors were observed including talking across the classroom to peers, yelling at the teacher, engaging in side conversations while the teacher is teaching, asking to leave the classroom, blurting out answers to questions without raising their hand, using profanity, threatening other students, getting out of their seat without permission, eating and drinking in class, arriving to class tardy, violating dress code, and singing in class. Some students indicated that they could not hear the teacher due to the noise in the classroom because of off-task behavior. This suggested that students' behavior interfered with their academic achievement. The data obtained during classroom observations allowed for the operationalization of a definition for disruptive classroom behavior. Disruptive behavior was defined as anything that interfered with the teacher being able to teach the daily objective as well as anything that interfered with other students' ability to comprehend the material being taught. Several underlying causes and factors contributed to the disruptive behavior observed.

The underlying causes and factors that were observed included: gender differences, large class sizes, and teachers' classroom management skills. These factors were consistent with previous studies. For example, research showed that boys were more likely to be more distractible, inattentive, and aggressive in comparison to girls (Gibb, Fergusson, & Horwood, 2008). Research also stated that large class sizes were predictors of negative classroom behavior (Parker, Nelson, & Burns, 2010). In classes with more

classroom disruptions, teachers lacked routine policies and procedures for seating arrangements, lacked policies for entering and leaving class, lacked procedures for participating in class discussions, and more. These observations revealed that teachers' lack of preparedness to deal with classroom management contributed to disruptive classroom behaviors. This issue was also studied in the literature; according to research, teachers who received an alternative teaching certification perceived classroom management to be the area that they felt least prepared (Koehler, Feldhaus, Fernandez, & Hundley, 2013). In addition to gender differences, class sizes, and teachers' classroom management skills serving as underlying causes and factors, school belonging, student engagement, school policies, family structure, parenting styles, and parent involvement were also associated with disruptive classroom behaviors. Due to so many complex factors being involved, the Ecological Systems Theory approach was used as a model for analyzing the problem; this framework displayed the complexity that exist when viewing a problem that involved a focal individual or child (Neal & Neal, 2013). Using this framework, each factor was explored within a needs assessment conducted at Excellence High School.

Needs Assessment Results

The needs assessment results revealed that most teachers at Excellence High School agreed that additional professional development was needed for managing misbehavior, and most self-reported that they experienced difficulties managing misbehavior in classes that had more male students than female students. Furthermore, most agreed that they experienced difficulties managing misbehavior in their larger classes in comparison to their smaller classes, and they reported that their class averages

were higher in the classes with fewer students. Results also revealed that some teachers were not using preventive classroom management strategies such as teaching classroom rules regularly throughout the semester, posting classroom rules, or establishing routine classroom policies and procedures for entering and leaving class. Some teachers also did not require students to sit in assigned seats.

Students' school belonging was assessed to determine if students who received suspensions had a lower sense of school belonging and decreased perceived teacher support in comparison to students who had not received any suspensions due to misbehavior. Results revealed that students in the high-risk group (students with truancy issues, suspensions, and an average below 70%) reported not feeling a sense of belonging at Excellence High School, while students in the low risk group (students without truancy issues, without suspensions, and an average above 70%) were neutral for school belonging. When comparing low and high-risk groups in terms of teacher support and school belonging, there was no statistically significant difference between the two groups. However, results revealed a negative statistically significant correlation between suspensions and grade averages suggesting that there was a decrease in grade averages with an increase in suspensions. Results revealed that most students were neutral when asked about students being well behaved in class and when asked if their teachers knew what to do when a student disrupted class. However, most students reported that their teachers created a positive learning environment. Based upon the results from the needs assessment, interventions that provided teachers with preventive classroom management strategies that assisted with managing misbehavior for large class sizes and an imbalanced proportion of male to female students were explored. In addition,

interventions that demonstrated a reduction in number of suspensions while increasing academic performance were also explored. This resulted in the selection of Positive Behavior Intervention Supports (PBIS) at the classroom level.

Research Design

The use of a mixed methods approach was used while implementing classroom-level PBIS, because the questions written for students required quantitative methods while the research question concerning teachers and students' experiences required qualitative methods. Furthermore, teachers self-reported their frequency use of classroom management strategies and the frequencies of disruptive classroom behaviors which allowed for the collection of quantitative data**.** After analyzing the data from the pre and post academic performance and attendance data, the researcher generated interview questions to further investigate the factors explored. For this reason, an explanatory sequential mixed methods design was used, because the research questions required quantitative methods to be answered first followed by qualitative methods (Creswell & Clark, 20110.

Intervention

This behavior intervention lasted for six weeks. Participating science teachers attended a 2.5-hour professional development (PD) session on using classroom-level PBIS. During the session, teachers were taught Tier I intervention strategies, collaborated to develop universal classroom rules and expectations, and they agreed upon five main target behavior issues to address during the intervention. These targeted behavior issues included: tardiness, cell phone violations, blurting out answers or talking without permission, arguing with peers, and being out of assigned seats without permission. The

teachers collaborated to create new consequences for addressing these behavior issues. During the PD, teachers also learned how to distribute acknowledgement tickets to students for appropriate behavior, attendance, academic performance, and academic engagement. Midway throughout the intervention, teachers attended a data team meeting to review their distribution of acknowledgement tickets and to discuss the progress with implementing Tier I strategies.

After the training, participating teachers reviewed the new classroom rules, expectations, and consequences and focused on the five main target behaviors. Within this lesson plan, the teachers also explained the intervention to students, and informed them that they would be allowed to participate in a celebration if they did not receive a disciplinary referral, get suspended, get assigned to In-School Suspension, or receive more than three tardies. Throughout the intervention, teachers distributed reward tickets for students' behavior, attendance, academic engagement, and academic performance. Students were instructed to deposit their tickets into a drop box to be considered for a drawing each week. The researcher collected ticket data at the end of every week, and winners received their gifts on Mondays. At the end of the semester, each teacher was asked interview questions concerning their experiences with PBIS, and students were invited to participate in a celebration.

Findings Section

Students

Results showed that after implementing classroom-level PBIS, there was a reduction in the frequency of disruptive classroom behaviors such as inappropriate vocalization, argumentative behavior, dress code violations, cell phone violations, and

getting out of assigned seats without permission. The inappropriate vocalization category included talking without permission, talking while the teacher was talking, and blurting out answers to questions. The argumentative category included arguing with peers and being argumentative with the teacher. Contrary to science students' reduction in disruptive classroom behaviors, students in math classes displayed an increase in disruptive behavior. In particular, students in the math only group had an increase in inappropriate vocalization and similar frequencies of argumentative behavior that were present at the beginning of the intervention. In addition, these students increased their frequency of getting out of their assigned seats without permission.

In addition, students in science classes had a reduction in tardies and they improved their compliance with authority, students in math classes had similar tardies and a similar level of compliance with authority throughout the intervention. One science teacher and three math teachers had an increase in students' class averages which was used to measure academic performance. Suspension data was not provided; therefore, results for suspensions were inconclusive. However, students in the treatment group were very responsive to the intervention, and 87% of the participating students were invited to attend a behavior celebration at the end of the intervention for not having more than three tardies, receiving a disciplinary referral, obtaining a suspension or being assigned to In-School-Suspension. Furthermore, there was a statistically significant difference in science students' level of educational engagement, but math students did not have any significant changes. Student data did not reveal any improvements in school climate reported by either group; however, science teachers reported improvements in classroom climate.

Teachers

Science teachers increased their use of reward classroom management strategies while math teachers decreased their use of reward strategies. More specifically, science teachers tended to acknowledge students more for their academic performance and academic engagement in comparison to acknowledging students for their behavior and attendance. In regards to preventive classroom management strategies, both math and science teachers increased their frequency use of allowing students to negotiate rules, but they remained the same on their frequency use of establishing routine procedures and teaching appropriate behavior. When considering initial correction classroom management strategies, math teachers decreased their use of these strategies while science teachers increased their use of these strategies specifically in regards to student conferences and their use of nonverbal body language. Both groups of teachers reduced their frequency use of later correction strategies such as writing disciplinary referrals, isolating students, and contacting parents. Surprisingly, math teachers reported an increase in level of preparedness for classroom management while science teachers reported a decrease in level of preparedness for classroom management.

Science teachers also reported positive experiences with implementing PBIS and they would recommend the intervention to other teachers. In conclusion, implementing classroom-level PBIS showed improvements for educational engagement, attendance, and disruptive classroom behaviors over a short period of time for students, and it showed an increase in teachers' use of reward strategies and a decrease in disciplinary referrals written.

Implications for Practice

If implementing this intervention in the future, the researcher would recommend incorporating more data team meetings with administrators being present to share disciplinary, academic, and attendance reports. Having more data team meetings for participating teachers would be useful, because this would allow the teachers to review acknowledgement ticket data and the other reports to help drive their implementation of preventive and reward classroom management strategies. It would allow for meaningful distribution of acknowledgement tickets. It may also be beneficial to send emails to the participating teachers regularly with instructions to distribute a ticket for a specific indicator. This would help with removing the bias associated with only acknowledging students for academic performance or academic engagement. This would force teachers to think about the students who behave appropriately and attend school frequently. To ensure that participating teachers have the support that they need, it is recommended that the researcher have the same planning period as the participating teachers. This would allow for sufficient collaboration.

Implications for Future Research

Future research studies should include a larger sample size for teachers in the treatment and comparison groups. Since this study only focused on the implementation of PBIS on a classroom-level and its effect on disruptive behaviors, attendance, academic performance, and academic engagement, future studies should focus on the school-wide implementation of PBIS and its effect on each of the four indicators. Future studies should also explore the effects of using classroom-level PBIS on teachers' use of

disciplinary referrals as well as the impact of the intervention on suspensions when it is implemented at the classroom-level.

Chapter 1

Introduction to the Problem of Practice

This chapter explores the literature that discussed my problem of practice on a national, state, and district level. Additionally, descriptions of how the problem was situated within my professional context was also provided. Following this discussion, a theoretical framework is provided to demonstrate how the problem was viewed. Furthermore, the underlying causes and factors that contributed to the problem are discussed. These contributing factors are organized into three categories including school, teacher, and individual factors.

Problem of Practice

National Level

National school discipline data revealed concerns regarding minority students' disciplinary records. In comparison to White students, Black students were suspended and expelled at a rate 3 times higher (U.S. Department of Education Office of Civil Rights, 2014). More specifically, only 5% of White students received suspensions from school while 16% of Black students received suspensions (U.S. Department of Education Office of Civil Rights, 2014). In addition to race, gender differences were also reflected within the disciplinary data. Data revealed that boys received two out of three total suspensions (U.S. Department of Education Office of Civil Rights, 2014). Despite this gender difference, Black girls were suspended at higher rates than girls and boys of other ethnic decent (U.S. Department of Education Office of Civil Rights, 2014).

Besides school suspensions and expulsions, discipline was also an issue when considering the number of referrals to law enforcement for Black students. Even though

Black students represented 16% of student enrollment, these students accounted for 27% of students referred to law enforcement; while 41% of White students were referred to law enforcement (U.S. Department of Education Office of Civil Rights, 2014). The total school enrollment included 51% of White students (U.S. Department of Education Office of Civil Rights, 2014). Overall, there was an issue with disproportionality regarding race and gender for school suspensions and expulsion along with problems related to students' referrals to law enforcement.

State Level

In addition to school discipline being an issue on a national level, there were also concerns with discipline for the state of Alabama. In comparison to the national data, Alabamian students had a higher rate of male out-of-school suspensions for students who were Black, Asian, White, and two or more races (U.S. Department of Education Office of Civil Rights, 2014). Similarly, White, Black, Asian, and Native Hawaiian or Pacific Islander female students in Alabama had a higher out-of-school suspension rate than the national rates (U.S. Department of Education Office of Civil Rights, 2014). For the state of Alabama, Black male and Black female students also had higher out-of-school suspension rates in comparison to other racial groups which was consistent with national data (U.S. Department of Education Office of Civil Rights, 2014). Based upon the data, school discipline had to be addressed to lower suspension rates and reduce disproportionality. Closer attention was warranted to evaluate the underlying causes for misbehavior and types of disruptive behaviors that lead to out-of-school suspensions.

District Level

In comparison to 58 schools within the Green-Leaf County School System (pseudonym) in Alabama, Excellence High School (pseudonym) had more students to receive class 3 disciplinary infractions (K. Eaton, personal communication, January 29, 2016). Examples of class 3 disciplinary infractions included: arson, assault, possession of alcohol, intent to use a knife, use of profanity or vulgarity, possession of drugs, unauthorized activation of a fire alarm, vandalism, bomb threats, battery upon school board employee, possession of weapons, making threats to students or a school board employee, and more (K. Eaton, personal communication, January 29, 2016). Class 3 disciplinary infractions lead to suspensions and expulsions. According to INOW database analysis, 963 disciplinary referrals were written during the 2014 academic year and the reports showed that 735 referrals were written between August 2015 and December 2015 (K. Eaton, personal communication, January 29, 2016).

Not only was discipline an issue in comparison to other schools within Green-Leaf County when comparing the number of class 3 infractions received, but student achievement averages were also lower than other schools within the district and the state of Alabama. For example, the ACT data results from 2011 to 2015 showed that the graduates of Excellence High School performed below Alabama's state average in every core subject including mathematics, science, reading, and English (L. Akin, personal communication, January 29, 2016). In addition, ACT Plan test score data from the 2013 to 2014 academic school year indicated that Excellence High School students scored below the district and state averages in reading and mathematics (*US News and World Report*, 2016). Overall there was a problem with student behavior that contributed to

higher rates of referrals, higher rates of suspensions and expulsions, and lower academic achievement that needed to be addressed within the professional context.

Context of Professional Practice

Excellence High School was located within a suburb, and it was one of 13 high schools within the Green-Leaf County School district in Alabama. The student body consisted of 85% African American, 12% White, 2% Hispanic, 1% two or more races, 0.2% Asian, and 0.1% Hawaiian Native or Pacific Islander (*US News and World Report*, 2016). The student population consisted of 55% male and 45% female students (*US News and World Report*, 2016). Of these students, 60% received free lunch and 9% of the students qualified for reduced priced lunch which indicated that 69% of the study body was classified as economically disadvantaged (*US News and World Report*, 2016). The demographics of the student population were evident while observing the problem of practice within context, because each teachers' class reflected the demographic make-up of the study body.

While completing classroom observations to determine the types of behaviors that disrupted the learning environment within my professional context, I observed several disruptive behaviors including talking across the classroom to peers, yelling at the teacher, engaging in side conversations while the teacher is teaching, asking to leave the classroom, blurting out answers to questions without raising their hand, using profanity, threatening other students, getting out of their seat without permission, eating and drinking in class, arriving to class tardy, violating dress code, and singing in class. These behaviors disrupted the learning process within the classroom. Even though students' grades and standardized tests scores were not obtained due to the students not returning

parental consent forms, it could be inferred that some students were not able to understand the content material being taught because of the disruptions that occurred in the class. For example, in one class, a female student expressed her lack of understanding of the daily objective indicating that she could not hear the teacher due to the noise in the classroom because of off-task behavior. The data obtained during classroom observations allowed for the operationalization of a definition for disruptive classroom behavior. Disruptive behavior was defined as anything that interfered with the teacher being able to teach the daily objective as well as anything that interfered with other students' ability to comprehend the material being taught. Several underlying causes and factors contributed to the disruptive behavior observed.

The underlying causes and factors that were observed included: gender differences, large class sizes, and teachers' classroom management skills. Research showed that boys were more likely to be more distractible, inattentive, and aggressive in comparison to girls (Gibb, Fergusson, & Horwood, 2008). Differences were observed between the classes that had more girls in comparison to more boys. For example, when comparing a class that consisted of 21 boys out of 29 students to a class with 15 girls out of 25 students, the class with the majority boys was louder and had more disruptions in comparison to the class with more girls. Gender was not the only factor contributing to these disruptions; class size also had an impact on disruptive classroom behavior. Large class sizes were predictors of negative classroom behavior (Parker, Nelson, & Burns, 2010). This was evident within the classes observed; there were more disruptions in the larger classes. For example, classes with 29 students and 27 students had more class disruptions in comparison to classes with 15 students and 7 students.

In addition to gender differences and class sizes being observed as underlying causes and factors that contributed to disruptive classroom behavior, teachers' classroom management skills were also observed. In classes with more classroom disruptions, teachers tended to lack routine policies and procedures for seating arrangements, lacked policies for entering and leaving class, lacked procedures for participating in class discussions, and more. For example, students did not appear to have assigned seats; it was evident that students were sitting next to their friends which allowed for more off-task behavior. In three of the classes, there were no established procedures for leaving the classroom; this allowed for students to disrupt instruction to ask to leave the class. In addition, in four different classes, there were no procedures for entering class late; this caused disruptions in the flow of instruction. In addition, four of the teachers observed continued to teach while their students engaged in side conversations and they yelled over them instead of requiring them to be quiet. These teachers asked students to stop talking multiple times. These observations revealed that teachers' lack of preparedness in classroom management contributed to the problem of disruptive classroom behaviors. This issue has also been studied in the literature; according to research, teachers who received an alternative teaching certification perceived classroom management to be the area that they felt least prepared (Koehler, Feldhaus, Fernandez, & Hundley, 2013).

Theoretical Framework

To add to gender differences, class sizes, and teachers' classroom management skills as underlying causes and factors, school belonging, student engagement, school policies, family structure, parenting styles, and parent involvement were also associated with the problem of students' disruptive classroom behaviors. Due to so many complex

factors being involved, the Ecological Systems Theory approach was used as a model for analyzing the problem of disruptive classroom behavior; this framework displayed the complexity that exist when viewing a problem that involved a focal individual or child (Neal & Neal, 2013). Microsystem was the term used to describe the social interaction between a focal individual and other people (Neal & Neal, 2013). Examples of a microsystem included the students' family, the school, and the teachers' classroom. This part of the framework included the factors for school belonging, school engagement, and parenting styles, because each of these settings included the child and a group of people within that environment. Mesosystem was a term used to describe the student or focal individual's interactions with people in different settings (Neal & Neal, 2013). This was part of the framework that included factors such as parental involvement, because the student interacted with the parent at home and at school. In addition, the exosystem construct was used to describe social interactions that a group of people had that excluded the student, but some of the people in the group indirectly interacted with the student (Neal & Neal, 2013). The factor that was examined within this level included school policies for addressing misbehavior. The next level of the ecological system theory framework was macrosystem; this construct was described as the governing foundation that determined the interactions between all relationships within the system (Neal & Neal, 2013). The factors examined at this level included political and legal influences that led to an increase in class sizes due to budget cuts that reduced the number of teacher units at Excellence High School. The final construct was chronosystem which was defined as the changes that occurred over time that impacted the student (Neal & Neal, 2013). The factor that was examined at this level was family structure; a change in family

structure from a two-parent household to a single parent household or reconstructed family could lead to changes in student behavior.

School Factors

This section contains research literature that explained school factors that served as underlying causes for disruptive classroom behaviors. For example, school policies influenced students' behavior, as well as school belonging. Furthermore, class size had an impact on students' behavior. Not only does this section explain how school policies, school belonging, and class size influenced student behavior, it described how school factors impacted student achievement.

School Policies

Over the past decades, the way that students have been reprimanded for misbehavior has changed. For example, corporal punishment was once a form of discipline within schools; however, it was banned from schools inside and outside of the United States. In Kenya 80% of teachers continued to use corporal punishment even after it was banned, because they believed that it was necessary to effectively manage classroom discipline (Mwai, Kimengi, & Kipsoi, 2014). There were limitations to this data, because the study was conducted in a primary school setting in Kenya among a population that differed from the context being studied; however, this data suggested that there was a need for professional development opportunities for teachers, because some teachers did not know how to manage a class effectively without using corporal punishment if they were teaching when corporal punishment was once used. Autobiographies revealed that most students did not believe that corporal punishment was effective in managing misbehavior, because students considered the implementation

of corporal punishment as a break in a social contract between teachers and students (Middleton, 2008). These students indicated that the implementation of corporal punishment was very subjective and that it had detrimental effects on their lives in the future (Middleton, 2008). This data did have limitations because most of the autobiographies were written by White males; literature is needed to learn the perspectives of other racial groups and the female population. Despite this limitation, this qualitative data suggested that there was a need for an objective policy for addressing disciplinary issues within schools.

In addition to the change in policy for implementing corporal punishment, there were also changes over the years in the enforcement of the zero-tolerance policy. Zero tolerance was initially implemented in schools to eliminate drugs; however, in 1989, schools began to allow for expulsion of students for drugs, fighting, gang affiliation and later school disruption (Skiba & Knesting, 2001). Case studies and national newspapers were used as evidence to show that zero tolerance did not impact students in terms of being able to change students' problem behaviors; instead, zero tolerance led to an increase in racial disparity gaps in addressing disciplinary actions and it led to an increase in high school drop-out rates (Skiba & Knesting, 2001). This suggested that school policies had an impact on students' behavior and academic achievement. This was further supported by Wallace, John, Goodkin, and Bachman (2008), which showed that Black boys are more likely to get suspended or expelled in comparison to American Indian boys. In addition, Blacks, American Indians, and Hispanics were two to five times more prone to experience school expulsions or suspensions (Wallace et al., 2008). Instead of reducing misbehavior, suspensions and expulsions led to later arrests and poor academic

performance (Wallace et al., 2008). In addition, there was a reduction in disciplinary referrals written for all racial groups except Blacks (Wallace et al., 2008). In addition to ineffective school policies affecting racial groups differently, school belonging was another underlying cause that needed to be explored.

School Belonging

In addition to school policies, school belonging was also a factor that contributed to student misbehavior. In particular Demanet and Van Houtte (2012) used the schools-as-communities-perspectives theory approach to study school belonging and school misconduct. Misconduct was defined as skipping school, school tardiness, engaging in drugs, and smoking (Demanet & Van Houtte, 2012). The results revealed that increased misconduct was significantly correlated with decreased perceived teacher support and school belonging (Demanet & Van Houtte, 2012). This article was beneficial because it revealed the significance of making students feel like they belong at school to reduce misbehavior. The concept of school belonging was similar to the definition used in Wang and Fredricks (2014) and Hirschfield and Gasper (2011) articles for emotional engagement. Emotional engagement involved students' ability to feel like they belong within the school environment (Wang & Fredricks, 2014). There were gaps in the literature that did not include findings for the relationships between the three types of engagement, school belonging, and disruptive classroom behaviors. The literature was limited because it used two different terms when discussing misbehavior including delinquency and misconduct. None of the literature focused on classroom behavior specifically. However, despite these articles not having a clear linkage to classroom behavior, class size was a factor that showed a clear connection.

Class Size

According to Englehart's (2006) research that used semi-structured interviews with 8 teachers, social loafing predicted student behavior because of class size. The social loafing theory was defined as individuals exhibiting less effort, less motivation, and having the tendency to hide in the crowd due to increased class size (Englehart, 2006). In addition, off-task behavior occurred when there was an increase in proximity away from the teacher; students were less likely to present information to the class when they were unfamiliar with everyone in the large class (Englehart, 2006). To add to this literature, Parker, Nelson, and Burns (2010) also indicated that large class sizes were predictors of negative classroom behaviors. Based upon these results, additional teacher training for managing classrooms with larger class sizes was needed. During pre-service training, teachers were taught to use proximity as a technique for managing misbehavior, but this strategy tended to be ineffective in large classes. This was evident during field observations, because the class sizes were so large that it was difficult for teachers to be near students with disruptive behaviors.

Though the literature was consistent for the effects that large class sizes had on disruptive classroom behaviors, the current research was not consistent in terms of the benefits of smaller class sizes for academic achievement. The Tennessee demonstration project revealed that when kindergarteners through third grade students were in classes with 13 to 17 students, they performed significantly better on achievement tests in comparison to other students who were in classes of 22 to 25 students (Lewit & Baker, 1997). Even years later, the students who were in smaller classes continued to outperform students who were in larger classes during their earlier years of school (Lewit & Baker,

1997). In addition to the success of the Tennessee demonstration project, the STAR experiment in Tennessee indicated that the test scores for elementary school students increased within the first year of reducing the class sizes (Betts & Shkolnik, 1999). However, a different research study suggested that class size does not have a statistically significant effect on academic achievement (Hoxby, 2000). In addition, Jepsen and Rivkin (2009) indicated that reducing class sizes was not beneficial if the school system continued to hire teachers who were not highly qualified or inexperienced teachers.

Overall, the differences within the literature did not lead to a concise conclusion for the impact that class size had on achievement, additional research was needed. In addition, one of the concerns observed during field observations was the portions of male students verses female students within large classes; this was an area of interest that had not been studied within the literature. Even though there were discrepancies in the literature concerning class size and achievement, there was a clear association between class sizes and misbehavior. Teachers needed additional training on managing large classes, because it was difficult to reduce large class sizes.

Teacher Factors

This section provides an overview of teacher factors that served as underlying causes for students' disruptive classroom behaviors. For example, teacher certification type and pre-service training were explored to gain insight to determine if training and certification type affected teachers' classroom management skills for addressing disruptive classroom behaviors. In addition, teachers' cultural differences, classroom experience, and teachers' use of appropriate instructional strategies were discussed.

Certification and Training

Teacher certification was a contributing factor for student behavior. Koehler, Feldhaus, Fernandez, and Hundley (2013) revealed a statistically significant difference between individuals with and without alternative certification graduate degrees; individuals without an alternative certification reported being more prepared for classroom management. Differences in the type of preservice training received influenced teachers' ability to manage a class. This study used a two-phase mix method approach with 13 graduate students completing a questionnaire and four of the 13 students were interviewed after data analyses was completed for the questionnaires (Koehler, Feldhaus, Fernandez, & Hundley, 2013). This design was very effective in allowing for a holistic view of the differences between types of certification received and preparedness; allotting time for interviews as a form of follow-up after participants completed the questionnaires allowed the authors to ask meaningful questions to support the quantitative data collected.

Adding to this literature, Monroe (2009) indicated that teachers reported that preservice training stressed the importance of following the textbook strategies for managing misbehavior; whereas, experiences in the classroom required different measures to be taken when addressing misbehavior in urban populations. To further add to the concept of pre-service training as a factor, Woodcock and Reupert (2012) revealed that pre-service teachers who attended a four-year traditional teaching program were more confident using preventive classroom management strategies in comparison to pre-service teachers who completed a one-year graduate training program.

Teacher Cultural Differences

In addition to pre-service training and type of certification, teachers' perceptions of misbehavior due to cultural differences were also factors. Additional research revealed that effective teachers did not perceive certain behaviors as disruptive because these teachers understood the cultural norms of students (Monroe, 2009). Even though classroom behavior was a problem within the context being studied, some teachers perceived some classroom behaviors to be disruptive while other teachers did not consider certain behaviors to be a problem. Another study indicated that teachers who wrote more disciplinary referrals internalized cultural, discipline, and ideological constructs by preset perceptions shaped largely by the dominant culture concerning behavior and achievement; this study involved only four teachers at an alternative school (Pane, Rocco, Miller, & Salmon, 2014). This suggested that preconceived notions affected the way that teachers viewed behavior. When teachers were from backgrounds that were different from the students that they taught, they perceived certain behaviors as disruptive.

Classroom Experience

To build on this information, Noltemeyer, Kunesh, Hostutler, Frato, and Sarr-Kerman's (2012) research study involving 57 teachers indicated that teachers with more classroom experience were more likely to ignore certain behavioral issues while less experienced teachers tended to respond to most incidents. This suggested that some teachers were likely to view certain behaviors as less of a problem as they progressed throughout their teaching career. There were differences between novice and experienced teachers. For example, Ratcliff, Jones, Costner, Savage-Davis, and Hunt (2010) used

observations to determine key differences between teachers who were classified as strong teachers in comparison to teachers who were classified as needing additional improvements. The results indicated that teachers who needed additional training had issues with managing misbehavior that continued in the following cycle: student misbehaved, teachers tried to stop the disruptive behavior, student continued the behavior, teacher became frustrated or stressed, which led to an increase in the disruptive student behavior (Ratcliff, Jones, Costner, Savage-Davis, & Hunt, 2010). This article provided a clear link between how teachers' behavior was related to students' misbehavior. Not only did the teachers' reaction to student misbehavior impact future behavior, but the teachers' use of appropriate instructional strategies and classroom management strategies also influenced students' behavior.

Appropriate Instruction Blended with Classroom Management

Adkins-Coleman (2010) explored the implementation of culturally responsive classroom management as a theoretical framework for creating environments conducive to learning in urban high schools. The culturally responsive classroom management framework required teachers to empathize with students' experiences and cultural backgrounds, set and enforce high standards for student's performance, and create a collaborative and caring classroom environment (Adkins-Coleman, 2010). Basically, this type of management allowed for the teacher to understand students' cultural backgrounds while making decisions concerning discipline and appropriate instructional strategies that met the needs of students from diverse backgrounds. The main question that Adkins-Coleman (2010) asked was, what were the challenges and successes of urban high school teachers. The results of the case study revealed that teachers who utilized culturally

responsive classroom management had students who were engaged cognitively with academics, met the teachers' high standards, and felt compelled to succeed academically and behaviorally (Adkins-Coleman, 2010). The results from this study were imperative for education majors to learn prior to teaching in an urban school setting similar to Excellence High School (Adkins-Coleman, 2010). College education professors should also review the results from this study so that they can provide pre-service teachers with real-life knowledge of culturally responsive classroom management techniques for implementing in an urban setting (Adkins-Coleman, 2010).

Not only did this research add pertinent information to the literature about classroom management, but it also provided scenarios of appropriate instructional strategies that were used to cognitively engage students and prevent disruptive classroom behavior. These strategies related directly to the elements used to describe culturally responsive teaching. According to Gay (2002), culturally responsive teaching had five main elements which required teachers to: develop a cultural knowledge base, design a relevant curriculum, use cultural congruity in classroom instruction, use appropriate cross-cultural communication, and demonstrate cultural caring and build learning communities. These elements were evident within Adkins-Coleman (2010) work because teachers established classroom routines, policies, procedures, and expectations that the students were expected to comply with daily. Furthermore, teachers created an environment that promoted mutual respect and high behavioral and academic expectations (Adkins-Coleman, 2010). These were techniques that can be used to promote cross-cultural communication and to build learning communities (Gay, 2002). Furthermore, teachers used engaging activities that allowed for limited off-task behavior

(Adkins-Coleman, 2010). Students were also provided with challenging and grade-level appropriate assignments that kept their attention the entire class period (Adkins-Coleman, 2010). Using strategies that were most appropriate for the targeted diverse student population promoted cultural congruity in classroom instruction and increased students' academic achievement when they were taught using a style that related to their cultural backgrounds (Gay, 2002). Being off-task was a sign of disruptive classroom behavior, and students could not be academically engaged and disruptive at the same time (Radley, Dart, & O'Handley, 2016). For this reason, it was imperative that teachers planned lesson that promoted student engagement and rigor to disease off-task behavior. It was noted that the only time that students questioned assignments and engaged in off-task behavior was when they were assigned a worksheet that did not seem challenging to them (Adkins-Coleman, 2010). This suggested that teachers should be strategic when planning lessons, and that teachers should assign students challenging tasks that stimulated their attention the entire class period to reduce disruptive classroom behaviors. Overall, teachers should utilize instructional strategies that targeted the interest of the students they taught.

Individual Factors

This section explores individual student factors that served as underlying causes for students' disruptive classroom behavior. For example, students' home factors such as family structure and their parents' parenting styles were discussed. Information was provided to describe the different affects that family structure and parenting styles had on students' behavior and academic achievement. In addition, different types of student engagements were explored along with gender differences. This research explained how

engagement and gender differences impacted behavior and achievement. Lastly, this section described how individual students were influenced behaviorally by their peers.

Family Structure

Two parent households, single parent households, and reconstructed families that involved the remarrying of a biological parent to a step parent were the different types of family structures that were studied in relation to students' behavior and achievement. According to Eamom and Altshuler (2004), living in a single parent household predicted behavioral issues. Children from single parent households typically spent less time with their parents and more time alone which provided time for them to engage in delinquent behavior due to a lack of social structure and support (Petts, 2009). According to Petts (2009) students from two parent households were less likely to engage in delinquent behavior because they had social structure and support from both parents. To further add to this, students tended to misbehave when there were not clear boundaries at home when tension occurred between parents and when there was not a close physical and psychological relationship with the noncustodial parent (Taanila, Laitinen, Moilanen, & Jarvelin, 2002). Two thirds of the students with a new step parent experienced behavior issues at school (Taanila et al., 2002). In addition to impacting students' behavior, this change in life events also led to changes in students' achievement.

Research indicated that family structure was a predictor of grade point averages and attendance, with students from two parent households having higher grade point averages and better attendance than remarried or students from single parent households (Ham, 2004). Supporting this data, Furr (1998) showed that students from two-parent households had higher SAT scores when their fathers were involved. Overall, the

literature showed a clear connection between family structure and student misbehavior and achievement. More specifically, parenting styles also had a major impact on students' behavior.

Parenting

There were three major types of parenting styles that were described in the literature including authoritative, authoritarian, and permissive. Case studies completed with five parents and guardians of high achieving African American students with good attendance and good behavior revealed that the parents had an authoritative parenting style that aided in the success of the student (West-Olatunji, Sanders, Mehta, & Behar-Horenstein, 2010). The authoritative parenting style was described as displaying firm discipline while encouraging and caring for the child; it had a positive correlation with academic achievement (West-Olatunji et al., 2010). Simons, Simons, and Su's (2013) research also revealed that the authoritative parenting style yielded more positive outcomes for student's conduct, increased school engagement, and decreased depressive symptoms. On the contrary, permissive parenting had ineffective boundaries between the parent and the child, and had a negative correlation with academic achievement (West-Olatunji et al., 2010). The authoritarian style of parenting increased the chances of their child engaging in delinquent behavior because they were stricter; this allowed for fewer opportunities for their child to demonstrate self-control and make their own decisions (Petts, 2009). It was suggested that parents have a supportive parenting style that allowed for the child to make decisions and demonstrate self-control to reduce the chances of the child engaging in delinquent behavior (Petts, 2009). These articles presented qualitative and quantitative data that demonstrated that parenting styles were contributing factors for

students' behavior and achievement. Furthermore, in addition to parenting effects, peers also had an impact on students' behavior and achievement.

Peer Effects

Véronneau and Dishion (2010) studied peer and parenting factors as predictors of the changes in problem behavior that middle school students encountered. The authors' main goal was to determine how family and peer experiences could either be a risk factor or a protector against changes in problem behavior during middle school (Véronneau & Dishion, 2010). The authors hypothesized that acceptance from peers, rejection by peers, and having friends who were antisocial would all be predictors of increased behavioral problems during middle school years (Véronneau & Dishion, 2010). Véronneau and Dishion (2010) predicted that the aforementioned factors would predict problem behaviors more than gender, academic achievement, and students' engagement in school. In addition, the authors also hypothesized that having high achieving friends and more parent-monitoring would protect against behavioral problems that could arise from peer influences (Véronneau & Dishion, 2010). The results of this study revealed that the authors' hypotheses were correct (Véronneau & Dishion, 2010). Being around high achieving friends were predictors of fewer behavior problems for students during middle school, and peer acceptance and rejection were predictors for more behavioral problems (Véronneau & Dishion, 2010). Not only did parent monitoring predict fewer behavior problems, this also protected against students' developing problem behavior if the student was not being accepted by peers (Véronneau & Dishion, 2010).

In addition to research providing insight on how peers influenced behavior problems, research was also conducted to investigate students' perspectives concerning

the influence of peers and school on African American students' achievement (Butler-Barnes, Estrada-Martinez, Colin, & Jones, 2015). The main questions that the authors asked were if peers and the school environment influenced the perceptions and views of African American students on educational achievement (Butler-Barnes et al., 2015). Three protective models were used for the framework of this study. These models included protective-protective, protective-stabilizing, and protective-reactive (Butler-Barnes et al., 2015). The protective-protective model expected students' achievement goals to improve if one had friends with a strong attachment to the school setting and had high achievement aspirations (Butler-Barnes et al., 2015). Students with friends with high academic aspirations and a high level of attachment to the school setting were expected to have a stronger association with high motivation levels concerning academic grades based on the protective-stabilizing model (Butler-Barnes et al., 2015). According to the protective-reactive model, students would respond to negative factors with protective factors (Butler-Barnes et al., 2015). The results from this study indicated that school attachment served as a protective factor for most African American male students even if their environmental factors included classmates with low achievement aspirations (Butler-Barnes et al., 2015). The models for protective-stabilizing and protective reactive were true for African American male students (Butler-Barnes et al., 2015). For African American female students, academic performance was higher for students from backgrounds of higher socioeconomic status (Butler-Barnes et al., 2015). This information was important for teachers and administrators who work in professional settings with high percentages of African American students like Excellence High School

(Butler-Barnes et al., 2015). Besides focusing on how parents and peers impacted students' behavior and achievement, student engagement was also considered.

Student Engagement

Wang and Fredricks (2014) used a framework that established three different types of engagement including behavioral, cognitive, and emotional engagement. Behavioral engagement focused on students' involvement and participation in academic activities (Wang & Fredricks, 2014). Cognitive engagement focused on the students' ability to self-regulate their own learning, while emotional engagement focused on the students' indication of learning, feeling successful, and enjoying school while feeling like they belong (Wang & Fredricks, 2014). This article added to the literature by making a clear connection between school engagement, behavior, and achievement. The results indicated that a decrease in behavioral engagement and emotional engagement led to an increase in delinquency and substance use, and it revealed that a decrease in behavior engagement was a predictor of high dropout rates (Wangs & Fredricks, 2014). This article was generalized to the context being studied, because 58% of the participants were African Americans (Wang & Fredricks, 2014). Even though this article suggested that behavioral engagement and emotional engagement were factors that contributed to student behaviors, it did not specifically discuss classroom behaviors that were the focus of the context being studied.

To expand on Wang and Fredricks (2014) article, emotional engagement, behavioral engagement, and cognitive engagement were also used as constructs in Hirschfield and Gasper's (2011) article which revealed that increased behavioral engagement greatly predicted a decline in students' delinquency. The study also revealed

that delinquency decreased cognitive engagement which suggested that students were less likely to invest in academic activities (Hirschfield & Gasper, 2011). This article was beneficial because it also demonstrated a clear link between behavior and academic performance with engagement serving as a contributing factor. The only limitation was the difference in contexts. The participants in this study were inner-city Chicago public elementary school students; they completed an Attitudes and Behavior Survey and School Climate Survey that measured attitudes and perceptions of students concerning teachers and school (Hirschfield & Gasper, 2011). Besides student engagement at school, gender differences tended to impact students' behavior and achievement.

Gender Differences

According to Gibb, Fergusson, and Horwood (2008), female students outperformed males on standardized tests, attended and graduated from a university, and attained high school qualifications. This was not due to cognitive abilities, because males outperformed females on IQ tests for most age groups (Gibb, Fergusson, & Horwood, 2008). Differences were due to classroom behaviors; teacher assessments on student behavior revealed that boys were more distractible, inattentive, restless, and aggressive (Gibb et al., 2008). This article added to the literature because it included a clear link between classroom behavior and achievement. It provided evidence that disruptive classroom behaviors had a negative impact on student achievement; it also utilized a variety of data collections such as semi-structured interviews with students and parents, standardized test scores, and teacher assessments (Gibb et al., 2008). Using qualitative and quantitative methods allowed the authors to demonstrate a clear association between classroom behavior and achievement.

The disruptive behaviors displayed by males that affected their academic achievement were influenced by other factors. For example, according to Butler-Barnes, Estrada-Martinez, Colin, and Jones (2015), school attachment served as a protective factor for most African American male students even if their environmental factors included classmates with low aspirations, while African American female students tended to have a higher academic performance when they were from backgrounds of higher socioeconomic status. This article was valuable because the research study targeted African American participants; this allowed for generalization to the context being studied. Despite this contribution, the article was lacking information concerning the impact of school attachment in relation to disruptive classroom behavior in general.

Conclusions

Overall, disruptive behaviors led to referrals that contributed to a continuous cycle of suspensions and expulsions that affected students of color nationally, state-wide, district-wide, and school-wide. In addition, there was a connection between students' misbehavior at Excellence High School and a lack of academic achievement. There were several factors that contributed to this type of behavior including school policies, gender differences, school engagement, school belonging, class sizes, teachers' classroom management skills, cultural differences, teachers' use of appropriate instructional strategies, parenting styles, teachers' preservice training and certification type, and family structure. Addressing parenting styles and family structure were not feasible because educators were limited to improving conditions within the school. Class size was not an actionable factor because recent district budget cuts required a reduction in teacher units which led to the increase in class sizes. As a result, the focus of the needs assessment was

school belonging, and teacher factors such as classroom management skills, pre-service training, and teacher certification.

Chapter 2

Assessing the Causes of Disruptive Behavior

This chapter provides a detailed description of a needs assessment that was conducted at Excellence High School to determine how selected underlying causes and factors from the research were present within the context. More specifically, an explanation for the selected factors is provided followed by the goals and objectives of the needs assessment. Research questions that addressed students and teachers are also provided. Demographic and general information is provided for the participants and measures used are defined. The data collection and data analysis are also described. Furthermore, the chapter ends with a summary of the results and a conclusion that provides implications for intervention research.

Needs Assessment

Based upon the research literature explored and the context of the school environment, the most actionable underlying causes and factors to address for student behavior were school belonging and teachers' classroom management skills. Pre-service training and teacher certification were also areas that needed to be further explored within the professional setting, and the data obtained concerning these factors could be used for longer studies after the dissertation. However, school belonging and teachers' classroom management skills were areas that could be studied for a short period of time during the implementation of an intervention. In addition, gender differences were explored in relation to teachers' class sizes and classroom management skills. Exploring each of these factors within a needs assessment allowed one to determine the underlying causes that are contributed to disciplinary issues at Excellence High School.

Goals and Objectives

Teachers

The goal of this needs assessment was to determine if the underlying causes and factors for disruptive behaviors at Excellence High School were consistent with the causes and factors demonstrated within the research literature. The factors that were addressed for teachers in this needs assessment included the type of certification received, classroom management skills for managing misbehavior with large class sizes, the management of misbehavior for different genders, use of routine policies and procedures, and the teaching of rules and expectations for appropriate classroom behavior. In addition, this assessment addressed whether or not class sizes affected students' behavior and achievement. The overall goal was to determine the salient factors associated with the problem of practice to later determine a potential intervention.

Teacher Research Questions

RQ1: Did teachers believe that additional professional development was needed for managing student misbehavior?

RQ2: Did teachers experience difficulties managing misbehavior in (a) larger classes and (b) classes with imbalanced sex ratios?

RQ3: Did teachers think that class size affected student achievement?

RQ4: Were teachers using preventive strategies or corrective strategies for managing misbehavior?

RQ5: How long were teachers teaching appropriate behavior?

RQ6: What was the association between teacher certification and level of preparedness in the area of classroom management and use of corrective and prevention strategies?

Students

Research showed that increased misconduct was significantly correlated with decreased perceived teacher support and school belonging (Demanet & Van Houtte, 2012). For this reason, students' school belonging was assessed in this needs assessment study to determine if students who received suspensions had a lower sense of school belonging and decreased perceived teacher support in comparison to students who had not received any suspensions due to misbehavior. The goal was to determine if a lack of school belonging was a cause for classroom misbehavior at Excellence High School. Another objective was to determine if students perceived classroom misbehavior to have an impact on their ability to learn in the classroom and to determine if students thought that their teachers knew what to do when students misbehaved in class.

Student Research Questions

RQ1: Was there a difference between low risk students and high-risk students in terms of school belonging and teacher support?

RQ2: What were students' level of school belonging?

RQ3: Was there an association between number of suspension and students' grade average?

RQ4: What were students' perceptions of teachers' classroom management skills?

RQ5: What were students' perceptions of disruptive classroom behavior on their learning?

Methodology

Participants

The teacher participants for the cognitive interview included eight female teachers from the following departments: science, social science, fine arts, career technical, mathematics, special education, foreign language, and physical education/health. Half of the teachers were White and half were African American. The student participants for the cognitive interview included seven students. This group of students consisted of four males and three female students. The students included one Asian student, one White student, and five African American students.

Table 2.1

Teacher Demographics by Gender, Race, and Age

Group	Male	Female	White	African American	22-30 years	31-40 years	41-50 years	51-60 years	60 and above	Total
No. of Teachers	9	15	12	12	5	6	4	6	3	24

Table 2.2

Teacher Demographics by Degree Level and Type of Certification

Group	Bachelor's Degree	Master's Degree	Education Specialist	Doctorate	Traditional Certification	Alternative Certification	Career Technical	Total
No. of Teachers	6	16	2	0	16	5	2	24

Note. One of the teachers did not list his or her certification type.

There were 24 teacher participants for the needs assessment. View demographics in Table 2.1 and Table 2.2. There were nine males and 15 females; 50% were White and 50% were African American. The participants included seven special education teachers,

four science teachers, three social science teachers, three mathematics teachers, two English teachers, two career technical teachers, one physical education teacher, one fine arts teacher, and one teacher who taught another subject. The education level for these teachers included two with an education specialist degree, 16 with a master's degree, and six with a bachelor's degree. Of these participants, 16 obtained traditional teaching certification, five obtained an alternative certification, and two obtained a career technical certification. The teachers' age range varied with five teachers between the ages of 22 and 30, six between 31 and 40, four between the ages of 41 and 50, six between 51 and 60, and three who were 60 years old or above. The teachers' years of experience ranged between 0 years to more than 21 years of teaching.

Table 2.3

Student Demographics by Gender, Race, and Grade Level for Needs Assessment

	Male	Female	White	African American	One or more race	Freshman	Sophomore	Junior	Senior	Total
No. of Students	8	19	2	24	1	8	13	5	1	27

The demographic information for the student participants are listed in Table 2.3. There were 27 student participants including eight males and 19 females. The participants included eight freshmen, 13 sophomores, five juniors, and one senior. The racial breakdown included 24 African Americans, two Whites, and one student who identified as being more than one race. View Table 2.4 for students' lunch status and family structure; 18 of these students received free or reduced lunch while the remaining nine did not receive assistance. In addition, 11 of the participants were from single-parent

households, 10 were from households with married parents, five lived with a biological parent and a step parent, and one student lived with foster parents.

Table 2.4

Student Demographics Lunch Status and Family Structure

	Free/Reduced Lunch	Full Price Lunch	Single Parent Household	Married Parents	1 Biological Parent and Step Parent	Foster Parents	Total
No. of Students	18	9	11	10	5	1	27

Measures

Demographic information was assessed using a student researcher developed teacher and student questionnaire. Demographic items included on the teacher questionnaire included: race (African American, White, Asian, more than one race, or other), gender (male, female), age, subjects taught, education level (bachelor's, master's, education specialist, doctorate), years of teaching experience, and teacher certification type. Demographic items included on student questionnaire were: race, grade level (freshman, sophomore, junior, senior), economic status (Do you receive free or reduced lunch? yes, no), and family structure (single-parent household, married, biological parent and stepparent, foster care, and other).

The following variables were used in this needs assessment: classroom management skills, teacher certification, teacher preparedness, class size, teacher attachment, school belonging, suspensions, grade averages, and students' perceptions of behavior. Classroom management skills referred to a teacher's ability to teach daily objectives with minimum disruptions in an environment that was safe, orderly, and in compliance with classroom rules and school policies. This was measured using a self-

reported student researcher developed teacher questionnaire that included items that asked about teachers' corrective and preventive strategies used. Sample questions for preventive strategies included: do you have classroom rules and procedures posted for students? (1=yes, 0=no). Another sample preventive strategy item was: how long do you spend at the beginning of the semester informing students of classroom rules, expectations, and procedures? (1=less than 1 week, 2=1 week, 3=2 weeks, 4=More than 2 weeks). A sample policies and procedure question was: Do you have routine procedures students must follow when they enter class late? (1=yes, 0=no). Teachers' corrective classroom management strategies included items such as: how frequently do you review classroom rules, expectations, and procedures throughout the semester with the students? (1=once a week, 2=once per month, 3=every time a student breaks a classroom rule, 4=only after long weekends and holiday breaks, 5=other)

The teacher questionnaire also included questions concerning teacher certification. Which of the following best describes your teacher certification? (1=traditional teaching certification, 2=alternative teaching certification, 3=emergency certification, 4=career/technical certification) Teacher certification related to whether the teacher had a traditional certification, alternative certification, emergency certification, or career/technical certification. Traditional teaching certification was described as a teacher completing a four-year teacher education program. Alternative certification was described as a type of certification where the teachers' first degree was not education. Emergency certifications were granted to individuals who did not have a degree in education and had never taken any education courses; however, these individuals were hired and provided with a certification due to an emergency to fill a vacant position.

Career/technical certification was used to describe the certification received for teachers who had worked in the field for a specific trade and later passed a test to teach those skills to students. Teacher preparedness was a phrase used to describe if a teacher felt prepared to manage misbehavior in the classroom. This variable was also measured using the teacher questionnaire. I feel prepared to manage my classroom. (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree)

Gender differences were defined as key differences between boys and girls. Boys were identified as a male and girl student was identified as a female. This variable was assessed using the teacher questionnaire. Items used included I struggle to manage misbehavior in classes that contain more male students than female students. Male students tend to be more disruptive than female students. The items were measured using a five-point Likert scale (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree).

Class size was defined as the total number of students present in a classroom. The impact of class size was measured on the teacher questionnaire. Sample questions included I experience difficulties managing misbehavior in my larger classes more than my smaller class. Another item included students are more likely to exhibit off-task behavior in larger classes. Both of these items were measured using a Likert scale (1=strongly disagree, 5=strongly agree). The impact of class size on achievement was also assessed. The class averages are higher for my classes that have fewer students (1=strongly disagree-6=not applicable).

School belonging and teacher attachment were defined from a schools-as-community perspective which suggested that students felt a sense of belonging when the

school environment and teachers provided a caring environment for the students. These variables were measured using Goodenow (1993) Psychological-Sense-of-School-Membership-scale that was included on the student questionnaire. Sample school belonging question include I feel like a real part of Excellence High School. Sample teacher attachment question include: teachers here are not interested in people like me. Both items were measured using a Likert scale with 1=strongly disagree, 5=strongly agree). The school belonging scale and teacher attachment scales were tested for reliability. The Cronbach's Alpha was $\alpha = 0.71$ which suggested that the items used on the scale were reliable for my target population. In addition, the mean for the school belonging scale was $\mu = 37.26$ and the mean for the teacher attachment scale was $\mu = 25.15$. To ensure validity, the questions were assessed during a group cognitive interview.

Students' number of suspensions and grade point averages were measured using a Graduation Tracking System that computed the total number of suspensions and students' grade averages. Students' perceptions of misbehavior and teachers' classroom management skills were measured using a self-reported student questionnaire. To ensure validity of the questions asked, a cognitive interview was conducted. Sample questions include: (1) students are generally well behaved in class, (2) when a student disrupts class, my teacher does not know what to do, (3) teachers create a positive learning environment for me, (4) when a student is disruptive in class, no one is able to learn. All of these questions were measured using a five-point Likert scale (1=strongly disagree, 5=strongly agree).

Data Collection Methods

Data was obtained using a quantitative approach and the survey method with teacher and student questionnaires in addition to secondary data obtained from a Graduation Tracking System. Cognitive interviews were conducted with teachers and students to review the teacher questionnaire and the student questionnaire. The teacher questionnaire was modified after receiving feedback concerning the wording of some of the survey items. In addition, a question was added to the teacher questionnaire. The original teacher questionnaire is in Appendix A, and the revised teacher questionnaire is available in Appendix B. Cognitive interviews were conducted during the student researcher's planning period and after school, notes were written and interviews were recorded. The student questionnaire remained the same after the cognitive interview with a group of students based upon the feedback received. View Appendix C for the student questionnaire. The cognitive interview with students was conducted during an advisory period with a random sample of the student researcher's advisory students.

The student researcher emailed a copy of the teacher consent form to every teacher at Excellence High School, and every teacher received a hard copy of the consent form in their mailbox or received a copy that was personally delivered to their classroom. Teachers also received a reminder email about completing the consent form in addition to morning announcement reminders. Out of 55 classroom teachers, 27 returned the consent form and 24 completed the questionnaire yielding a 49% response rate. The teacher questionnaire was personally delivered to each teacher, and teachers were given a week to complete and return the questionnaire.

The student researcher collaborated with the principal and instructional transformation specialist to obtain student data. The instructional transformation specialist obtained data from the Graduation Tracking System that grouped students according to risk factors in three areas: achievement or coursework (grade average), behavior (number of in-school and out-of-school suspensions), and attendance. Students were included in the three risk factors category if they had below a 70% grade average, had one or more in-school or out-of-school suspensions, and had more than the allotted five unexcused absences. Students were categorized in the two risk factors group if they met two of the three qualifications and included in the one risk factor category if they met only one qualification. In addition, students were grouped in the zero risk factors category if they did not have any referrals, maintained a grade average above 70%, and had fewer than five unexcused absences. The target population included students with three risk factors and zero risk factors which included 265 students. Only 69 students were classified as having three risk factors while 196 students had zero risk factors. An interval sample was used to select every third student on the list with zero risk factors to narrow the number of students. The Graduation Tracking System automatically listed students in alphabetical order. After the interval sampling, 64 students with zero risk factors were selected to participate in the study. Due to only having 69 students with three risk factors, every student was selected to participate in the study. This lead to 133 students being invited to participate in the study. Consent forms were given to students prior to the start of school in the gymnasium. The student researcher delivered consent forms to students who were not present in the gymnasium on the day that the forms were given out. Students were given the student questionnaire on the following two days prior

to the start of school. Out of 133 students selected, 27 students returned the consent form and completed the student questionnaire yielding a 20% response rate.

Data Analysis

Teacher factors. Descriptive analysis was performed to address questions concerning professional development, gender differences, class size and behavior, and class size and achievement (see Table 2.5). Teachers were asked the following question: do you believe that additional professional development is needed for managing misbehavior. As shown in Table 2.5, even though 20.8% of teachers responded that there was not a need for additional professional development for managing misbehavior, 62.5% of the respondents agreed that additional professional development was needed for managing misbehavior. Only 16.7% of participants remained neutral. This suggested that majority of the participating teachers thought that professional development for classroom management was necessary.

Furthermore, teachers were asked if they experienced difficulties managing misbehavior in classes with imbalanced sex ratio. As shown in Table 2.5, majority of teachers, 58.3%, agreed that they experienced difficulties managing misbehavior in classes with imbalanced sex ratio. Only 25% of teachers disagreed. Additionally, 16.7% of teachers remained neutral. Some teachers may have selected a neutral response because they may have equal distribution of female and male students.

In addition, teachers were asked if class they experienced difficulties managing misbehavior in larger classes. Table 2.5 shows that 25% of teachers disagreed which suggested that they did not experience difficulties managing misbehavior in their larger classes in comparison to their smaller classes. However, 62.5% of respondents agreed

that they experienced difficulties managing misbehavior in their classes with more students. One teacher responded not applicable; this was probably due to the teacher being a special education teacher with a resource room. Special education teachers tended to only have students in their classrooms when the student needed additional assistance. Only 8.3% of the teachers remained neutral for this question.

In addition to asking if managing misbehavior was an issue for teachers in larger classes, teachers were also asked about the effects of class size on student achievement. More specifically teachers were provided with the statement: class averages are higher in my smaller classes. Frequency distribution results are shown in Table 2.5.

Table 2.5

Frequency Distribution of Teacher Responses

Responses	Professional Development		Gender Differences		Class Size		Class Size and Achievement	
	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent
Disagree	5	20.8	6	25.0	6	25.0	5	20.8
Neutral	4	16.7	4	16.7	2	8.3	3	12.5
Agree	15	62.5	14	58.3	15	62.5	13	54.2
Not Applicable	0	0	0	0	1	4.2	3	12.5
Total	24	100	24	100	24	100	24	100

Some teachers, 20.8%, disagreed with this statement, while 12.5% of teachers were neutral. The teachers who responded neutral may not have had large classes to compare to smaller classes; this may have interfered with them being able to agree or disagree. In addition, 12.5% of teachers selected the answer choice for not applicable. These teachers were probably special education teachers since they did not have a specific group of students to determine class averages using their gradebooks in

comparison to other teachers. On the contrary, 54.2% of teachers agreed that their students in smaller classes had higher student achievement. These results supported the idea that class size had an association with misbehavior and student achievement.

To determine if teachers were using preventive classroom management strategies such as teaching classroom rules and expectations, posting classroom rules, requiring students to sit in assigned seats, and implementing policies and procedures for late arrivals to class and for leaving class, descriptive analysis were run. As shown in Table 2.6, 58.3% of teachers had rules posted in their class while 41.7% of teachers did not have rules posted in their class. Furthermore, as displayed in Table 2.6, 58.3% of teachers had a policy in place for students when they entered the class late while 37.5% of teachers did not.

Table 2.6

Frequency Distribution of Teachers' Responses to Preventive Classroom Management Questions

Responses	Rules Posted		Late Arrival		Leaving Class		Assigned Seating	
	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent
Yes	14	58.3	14	58.3	19	79.2	15	65
No	10	41.7	9	37.5	5	20.8	5	22
Not Applicable	0	0	1	4.2	0	0	3	13
Total	24	100	24	100	24	100	23	100

Note. One teacher did not respond to the question for seating assignments.

Examples of a policy would include a student signing a tardy folder or entering class with a pass that explained why they were tardy. The additional 4.2% of teachers selected not applicable; this was due to the teacher having a resource room. Students did

not report to a resource room at the beginning of the class period. Students reported to the resource room when they were experiencing difficulties processing content material in a general education classroom.

In addition, Table 2.6 shows that 79.2% of teachers had a policy for students when leaving their classroom while 20.8% of teachers did not have a policy. An example policy would be a student only leaving class if they had a restroom pass or he or she needed to go to the nurse. Table 2.6 reveals that 65% of teachers required students to sit in assigned seats for at least one of their classes, while 22% of teachers did not require students to sit in assigned seats for any of their classes. Only 13% of teachers selected not applicable; this is probably due to them having a resource room.

The length of time that teachers spent teaching classroom rules is very important for managing misbehavior. For this reason, teachers were asked about the length of time they spent teaching rules. Table 2.7 demonstrates that 83.3% of teachers spent one week or less teaching classroom rules, expectations, and procedures at the beginning of the school year while 16.6% of teachers spent two weeks or more than two weeks teaching classroom rules, expectations, and procedures.

Table 2.7

Frequency Distribution for Teachers' Responses for Time Spent Teaching Rules

Responses	Frequency	Valid Percent
Less than 1 week	10	41.7
1 Week	10	41.7
2 Weeks	2	8.3
More than 2 weeks	2	8.3
Total	24	100.0

Cross tabulation analysis was run to determine if there was an association or difference in responses based on teacher certification type and their preparedness to manage misbehavior in the classroom. Table 2.8 shows that 14 teachers who received a traditional teaching certification agreed or strongly agreed that they felt prepared to manage misbehavior in the classroom; while only one remained neutral and one teacher strongly disagreed. Four teachers who received an alternative teaching certification reported that they agreed or strongly agreed that they could manage misbehavior in the classroom while one teacher had a neutral response. The two teachers who received a career/technical certification reported that they agreed or strongly agreed that they felt prepared to manage misbehavior in the classroom. One of the teachers who participated did not respond to the item for certification type; therefore, there was missing data for one individual when cross tabulating for certification and preparedness. However, results indicated that there was not an association between teacher preparedness and type of certification received. These results were likely the case due to a small sample size. Results may have differed if all 55 teachers had participated in the study.

Table 2.8

Cross Tabulation Count for Certification Type and Level of Preparedness

Certification Type	Preparedness				Total
	Strongly Agree	Agree	Neutral	Strongly Disagree	
Traditional	7	7	1	1	16
Alternative	1	3	1	0	5
Career/Technical	1	1	0	0	2
Total	9	11	2	1	23

Student factors. To determine if there was a difference between low-risk students and high-risk students for school belonging and teacher support, independent samples t-tests were run. There was a total of 18 students in the low-risk group, and nine students in the high-risk group. The risk factors were based on attendance, behavior such as number of in-school and out-of-school suspensions, and grade averages. As shown in Table 2.9. the mean for each group was very similar; the low-risk group had a mean of 36.9, and the high-risk group had a mean of 37.9.

Table 2.9

Group Statistics for School Belonging

Low Risk			High Risk		
N	Mean	SD	N	Mean	SD
18	36.9	5.9	9	37.9	4.8

Based upon the results from an independent samples test (t-value=-.444), there was no statistical significance between the low-risk group and the high-risk group for school belonging. Sig (2-tailed) was .662. These results were probably due to having a small sample size.

When the low-risk group was compared to the high-risk group for teacher attachment, both groups had similar means. View Table 2.10 for mean comparisons. The low-risk group had a mean of 25.2 while the high-risk group had a mean of 25.0. Based upon the results from an independent samples test, there was no statistically significant difference between the groups in terms of teacher attachment (t-value=.11) and sig (2-tailed) =.92. These results were likely due to having a small sample size.

Table 2.10

Group Statistics for Teacher Attachment

Low Risk			High Risk		
N	Mean	SD	N	Mean	SD
18	25.2	4.2	9	25.0	5.5

To determine if students felt like they belonged at Excellence High School in general, a descriptive analysis was run for both groups. As shown in Table 2.11, 10 out of 18 students in the low-risk group were neutral when they answered the item: I feel like I belong at Excellence High School. This suggested that even though these students had good attendance, high grade averages, and no in-school and out of school suspensions, most of them had not decided if they felt like they belonged at the school or not. Only eight of the students in the low-risk group agreed that they belonged at Excellence High School.

Table 2.11

Frequency Distribution of Students' Ratings on School Belonging

	Low-Risk		High Risk	
Responses	Frequency	Valid Percent	Frequency	Valid Percent
Disagree	0	0.0	2	22.2
Neutral	10	55.6	3	33.3
Agree	8	44.4	4	44.5
Total	18	100.00	9	100.00

Table 2.11 also shows that four out of nine students in the high-risk group indicated that they agreed or strongly agreed that they belonged at Excellence High

School. Only two students in the high-risk group reported that they disagreed or strongly disagreed to feeling like they belonged at Excellence High School while only one remained neutral. Overall only students in the high-risk group reported not feeling a sense of belonging at Excellence High School.

To determine if there was an association between the number of suspensions received and students' class average, a correlation was run. The results suggested that there was a statistically significant negative correlation between the two variables. The Pearson Correlation was (r=-.78). Grade averages decreased as suspensions increase.

To view students' perceptions of teachers' classroom management skills, items were assessed using descriptive analysis. These items questioned if teachers provided a positive learning environment for them and if students thought that teachers knew what to do when students disrupted class. Table 2.12 displays the results for classroom environment.

Table 2.12

Frequency Distribution of Students' Responses

Responses	Class Environment		Teacher Lack of Management		Disruption of Learning		Behavior Overall	
	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent
Agree	12	44.4	3	11.5	14	51.9	5	18.5
Neutral	10	37.0	14	53.8	9	33.3	12	44.4
Disagree	5	18.5	9	34.6	4	14.8	10	37.0
Total	27	100.0	26	100.0	27	100.0	27	100.0

Note. One student did not respond to the question about teachers' classroom management.

Overall 44.4% of students reported that they agreed that their teachers created a positive learning environment for them, while 18.5% of students disagreed. The remaining 37.0% of students were neutral. Table 2.12 also shows the results for teachers'

classroom management skills. Results showed that 11.1% of students agreed that their teachers did not know what to do when students disrupted class, while 33.3% of students disagreed. The remaining 51.9% of students were neutral. There could be such a high percentage of students who reported neutral due to them fearing that a teacher may be reprimanded for not knowing what to do when a student disrupted class. In addition, students could have reported neutral because they had different opinions about different teachers.

Furthermore, to assess students' perceptions of disruptive classroom behavior on their learning, descriptive analysis was run. Students responded to the item: when a student is disruptive in class, no one is able to learn. Table 2.12 indicates that 51.9% of students agreed with this statement, while 14.8% of students disagreed. The remaining 33.3% of students were neutral.

Descriptive analysis was run to determine students' perception of other students' classroom behavior overall. Students responded to the item, students are generally well behaved in class. Table 2.12 shows that 18.5% of students agreed while 37% of students disagreed with this item. In addition, 44.4% of students were neutral. More students were probably neutral because they were probably comparing different teachers' class. For instance, some of these students may think that students were well behaved in some of their classes and not others. On the contrary, other students may have responded based upon how they felt about all of their classes.

Results Summary

Teachers

The factors addressed for teachers included type of certification received, classroom management preparedness, classroom management skills for managing misbehavior and achievement with large class sizes, managing misbehavior for different genders, using routine policies and procedures, and teaching rules and expectations for appropriate classroom behavior. Based upon the results, 87% of teachers indicated that they felt prepared to manage misbehavior in the classroom and there was no association between the type of certification received and teachers' preparedness to manage the classroom. Even though 87% of teachers felt prepared to manage misbehavior in the classroom, 62.5% of teachers agreed that additional professional development was needed for managing misbehavior. In addition, 58.4% of teachers agreed that they experienced difficulties managing misbehavior in classes that had more male students than female students, and 62.5% of teachers agreed that they experienced difficulties managing misbehavior in their larger classes in comparison to their smaller classes. To add to this, 54.5% of teachers agreed that their class averages were higher in the classes with fewer students. These results suggested that teachers felt prepared, but they were still struggling to manage misbehavior in the classroom due to gender differences and large class sizes. Achievement was also affected in some teachers' class.

The results for using preventive classroom management strategies showed that only 58.3% of teachers had rules posted in their classes, and only 58.3% of teachers had a policy in place of students when they entered the class late. In addition, 65% of teachers required students to sit in assigned seats for at least one of their four classes, while 22%

of teachers do not require students to sit in assigned seats for any of their classes. However, 79.2% of teachers had a policy for students when they asked to leave their classroom. When asked about teaching students appropriate behavior, 83.3% of teachers reported that they spent one week or less on teaching classroom rules, expectations, and procedures at the beginning of the school year while 16.6% of teachers spent two weeks or more than two weeks teaching classroom rules, expectations, and procedures.

Students

Students' school belonging was assessed to determine if students who received suspensions had a lower sense of school belonging and decreased perceived teacher support in comparison to students who had not received any suspensions due to misbehavior. In addition, other concerns addressed were students' perception of classroom misbehavior, the impact that misbehavior had on their ability to learn in the classroom, and to determine if students thought that their teachers knew what to do when students misbehaved in class. Overall, only students in the high-risk group reported not feeling a sense of belonging at Excellence High School. Majority of the students in the low-risk group were neutral. When comparing low and high-risk groups in terms of teacher support and school belonging, there was no statistically significant difference between the two groups. However, results revealed a negative statistically significant correlation between suspensions and grade averages suggesting that there was a decrease in grade averages with an increase in suspensions.

Results varied when students were asked about their perceptions of behavior and the environment that their teachers created. For example, 18.5% of students agreed that students were generally well behaved in class while 37% of the students disagreed; the

remaining 44.4 % of students were neutral. In addition, 44.4% of students reported that they agreed or strongly agreed that their teachers created a positive learning environment for them, while 18.5% disagreed. In terms of managing misbehavior, 11.1% of students agreed that their teachers did not know what to do when students disrupted class, while 33.3% of students disagreed. The remaining 51.9% of students were neutral.

Implications for Intervention Research

Based upon the results from the needs assessment, future research focused on interventions that provided classroom management strategies that teachers could implement. Because majority of the teachers indicated that professional development was needed, research was explored for effective classroom management professional development opportunities. Specifically, there was a need for an intervention that provided preventive classroom management strategies that assisted teachers with managing misbehavior for large class sizes and an imbalanced proportion of male to female students. Due to needs assessment results indicating a statistically significant negative correlation between suspensions and grade averages, potential interventions needed to demonstrate results that provided evidence for assisting teachers with managing disruptive classroom behaviors while also reducing number of suspensions and increasing grade averages. Because there was not a statistically significant difference for low-risk and high-risk students for school belonging and teacher attachment, these factors were not explored in the literature for intervention research. Additionally, teacher certification was explored further either, because the results did not suggest a statistically significant correlation between teacher preparedness for classroom management and teacher certification.

Chapter 3

Interventions to Address Disruptive Behaviors

This chapter begins with a review of my problem of practice, a summary of underlying causes and factors, and a synopsis of the guiding theoretical framework. Additionally, I provide a detailed overview of several classroom management interventions that could have been implemented to address students' disruptive behaviors. Furthermore, the interventions are organized into three groups including: teacher behaviors and classroom management, student behavior and classroom management, and teachers and students' behaviors. Following a detailed description of types of classroom management interventions, implications for an intervention design are provided.

Problem of Practice

School discipline was a school-wide, district, state, and national concern especially because of the disproportionately high rates of expulsions and suspensions of students of color after receiving a disciplinary referral. Writing excessive disciplinary referrals that resulted in suspensions and expulsions did not change students' problem behaviors; instead it resulted in a racial disparity gap for addressing disciplinary actions and increased high-school drop-out rates (Skiba & Knesting, 2001). This suggested that the methods used to address misbehavior had an impact on students' future behaviors and their academic achievement. Data that demonstrated that more Black students were suspended and expelled suggested that Black students were at-risk for low academic achievement. This was evident within Green-Leaf County Schools. Not only was discipline an issue in comparison to other schools, but Excellence High School's student achievement averages were also lower than other schools within the district and the state

of Alabama. For example, the American College Test (ACT) results from 2011 to 2015 showed that the graduates of Excellence High School performed below Alabama's state average in every core subject including mathematics, science, reading, and English (L. Akin, personal communication, January 29, 2016). In addition, ACT Plan test score data from the 2013 to 2014 academic school year indicated that Excellence High School students scored below the district and state averages in reading and mathematics (*US News and World Report*, 2016). Overall, there was a problem with the way that misbehaviors such as disruptive classroom behaviors and defiance were addressed. The needs assessment results demonstrated that there was a statistically significant negative correlation between suspensions and grade averages (Scott, 2016). Instead of writing referrals that lead to a continuous cycle of suspensions and expulsions followed by more problem behaviors and poor academic achievement, solutions were needed to reduce behavior issues and promote high academic achievement and engagement. To address this issue, a behavior management intervention was proposed.

Causes of Disruptive Classroom Behaviors

School policies were important factors that contributed to student behavior, but there were several other underlying factors that contributed to disruptive classroom behaviors as well. These included family structure (Eamom & Altshuler, 2004), gender differences (Gibb, Fergusson, & Horwood; 2008), teachers' classroom management skills (Koehler, Feldhaus, Fernandez, & Hundley, 2013), engagement (Wang & Frederick, 2014), parental involvement (Hayes, 2012), and class size (Parker, Nelson, & Burns, 2010). During a needs assessment, 62.5% of Excellence High School teachers agreed that professional development was needed to address managing misbehavior (Scott,

2016). In addition, 62.5% of participants indicated that they experienced difficulties managing misbehavior in larger classes in comparison to smaller classes (Scott, 2016). This was consistent with Parker, Nelson, and Burns' (2010) suggestion that students were more likely to engage in off-task behavior, referred to as social loafing, when they were in larger classes. Furthermore, 58.4% of Excellence High School teachers agreed that they experienced difficulties managing misbehavior in classes that contained more male students than female students (Scott, 2016). This conformed to the literature that indicated that male students were more likely to be easily distracted, inattentive, and hyperactive in comparison to female students (Gibb, Fergusson, & Horwood, 2008). Teachers' concerns about classroom management at Excellence High School were also consistent with teachers' reports on classroom management in the literature. According to Koehlar, Feldahus, Fernandez, and Hundley (2013), most teachers reported that they felt least prepared for classroom management in comparison to other teacher duties.

Theoretical Framework-Bioecological Systems Model

Because there were many factors that affected student behavior in different environments, a holistic approach was taken when addressing this problem. The bioecological systems theory served as the theoretical framework for the intervention. The reason for this was because students were influenced by microsystems which included the students' family, peer group, and school. This was supported by literature that revealed that single-parent households served as a predictor of delinquent behavior (Eamom & Altshuler, 2004). Furthermore, peer groups had an impact on student behavior. According to Bandura's (1986) social cognitive theory's triadic reciprocal determinism, there were interactions between people, their environment, and their

behavior in which each of these could influence the other. For this reason, students were influenced by their peers within a classroom and they could influence their peers within the same environment. Besides family and peer groups, students' behavior was also impacted by school policies. For example, evidence showed that zero tolerance had not impacted students in terms of being able to change students' problem behaviors; instead, zero tolerance led to an increase in racial disparity gaps in addressing disciplinary actions and it led to an increase in high school drop-out rates (Skiba & Knesting, 2001). Therefore, the way that school-wide discipline was addressed within a school had a negative effect on student behavior.

The mesosystem included the interactions between the family and the school, the peer group and the school, and the peer group and the family. When considering the mesosystem, parental involvement was a factor that contributed to students' behavior. Parents interact with their child's teachers and the parent interacts with the child. Research suggested that home-based parental involvement in which parents discussed school at home correlated with fewer disciplinary referrals, fewer absences, and predicted better grades (Hayes, 2012). Furthermore, parents who communicated with their child's teacher frequently had good behavior, exhibited high academic achievement, and had good attendance (West-Olatunji, Sanders, Mehta, & Behar-Horenstein, 2010).

The exosystem included the Alabama Accountability Act (ACA), the Green-leaf County Board of Education (GLCBOE), Alabama State Department of Education (ALSDE), and Green-Leaf County's Code of Conduct Book. All of these were included because each had an impact on students even though the individuals that designed these policies did not communicate with the students directly (Bronfenbrenner, 1977). The

ACA indicated that the schools that performed within the lower 6% on the ACT Aspire exam in math and reading were labeled as a failing school, and parents were allowed to send their children to private school while they received a tax credit that removed money from the general education trust fund that should provide money to traditional public schools such as EHS (Cason, 2015). This bill had a negative impact on the students, because EHS was labeled as a failing school. If a student was suspended from school due to disruptive classroom behaviors, it was difficult for him to learn material required to perform better on this required assessment. On a district level, GLCBOE established rules and regulations within the code of conduct book that students were required to follow. The code of conduct book also listed the types of infractions and potential consequences for each infraction.

The macrosystem included discrimination, lower class status, and racism when considering the culture among selected students. Sixty percent of EHS students received free lunch and 9% of the students qualified for reduced priced lunch which indicated that 69% of the study body was classified as economically disadvantaged (*US News and World Report*, 2016). As a minority, one encountered incidents of discrimination or racism.

The chronosystem included: the April 27 tornadoes, the Black lives matter movement, and the election of Donald J. Trump as the forty-fifth president of the United States of America. The April 27 tornadoes were included within the chronosystem, because several families within the city had to rebuild their homes or they relocated after April 27, 2011. The Black lives matter movement was included because this movement may have had an impact on Black, male students due to so many incidences of Black

males being murdered by police. In addition, the recent presidential election had an impact on students at EHS based upon the change in school climate the day following the election and the day of the inauguration.

The intervention addressed the students' microsystem for EHS. Using the definitions provided by Brofenbrenner (2000), disruptive class behavior was the dysfunction, and appropriate classroom behaviors were the competence. This literature review focused on interventions that addressed training teachers in classroom management skills to improve classroom behavior and academic performance. Addressing teachers' classroom management skills with an intervention could increase teachers' knowledge of preventive strategies that could be used to prevent disruptive classroom behavior while increasing student achievement and engagement. This could potentially lead to long-term outcomes that yield a reduction in the number of disciplinary referrals, suspensions, and expulsions. According to research, there was an association between problem behavior and student engagement. For example, Wang and Fredericks (2014) indicated that increased engagement predicted a decline in problem behavior, while a decrease in engagement was a predictor of delinquency and high drop-out rates. Additionally, Radley, Dart, and O'Handley (2016) suggested that students cannot be disruptive and academically engaged at the same time. Disruptive classroom behaviors were operationalized as students being out of their seats without permission, talking without permission, playing with irrelevant objects, and being off-task; while active academic engagement was displayed when students remained in their seats, read, wrote, and participated in class activities (Radley, Dart, & O'Handley, 2016). Overall, an intervention that addressed school-wide rules, expectations, and classroom management

strategies would be a solution for reducing students' disruptive behaviors and disciplinary referrals.

Classroom Management Interventions

Teacher Behavior and Classroom Management

Various classroom management interventions could be used to increase academic engagement and reduce disruptive classroom behaviors. Burke, Oats, Ringle, Fichtner, and DelGaudio (2011) implemented a Well Managed Classroom (WMC) intervention that was implemented schoolwide with second, third, and fourth grade teachers within an urban school context. Each teacher participated in a 14-hour in-person training session for WMC, which taught teachers how to establish appropriate expectations for students, use helpful cues, provide reinforcement for positive behavior, and implement effective strategies for correcting inappropriate behavior (Burke et al., 2011). The results showed that there was an increase in students' academic engagement and a decrease in number of suspensions after the intervention (Burke et al., 2011). For fewer suspensions to have occurred, teachers had to have written fewer referrals or less punitive consequences were given.

Despite the context of this study being in an urban setting, the results for WMC could not be generalized to my professional context. One of the main reasons for this was because, the study included elementary school students, while the context of interest was a high school. Furthermore, the teachers who participated within the study taught the same students all day, while teachers at the high school of interest taught different students each class period. There was more variability within a high school context that could not be accounted for within an elementary school setting. In addition, majority of

the student participants for WMC were from homes where English was not their first language (Burke et al., 2011). This was very different from the home environment for students at Excellence High School where most parents spoke English as their first language. The theoretical framework for WMC was grounded in bioecological and social interactional theories (Burke et al., 2011). Broenfenbrenner's bioecological theory (1977) provided a holistic framework that involved the student, their peers, family members, community environment, and societal influences. Furthermore, social interactional theory as developed by Patterson, Reid, and Dishion (1922) provided a framework for understanding the influences that students experienced from adult and peer influences. It also elaborated on how teachers could adjust to have an impact on students' behavior and academic engagement (Burke et al., 2011). Despite this intervention being grounded with the support of theory, the design of this intervention was too lengthy to replicate within a six-month duration. Therefore, I planned to only use elements from the intervention that could be implemented within a shorter duration. For example, I could use the same strategies that were taught to teachers during the training sessions such as teaching positive reinforcement, teaching appropriate expectations, and correcting inappropriate behaviors. This intervention was evaluated by the authors every three years after teachers received training for WMC (Burke et al, 2011).

In addition to teaching teachers how to establish expectations, use positive reinforcement for prosocial behavior, and correct misbehavior, addressing the way that teachers communicated with students was shown to yield increased academic engagement and decreased levels of disruptive behaviors. According to Matheson and Shriver (2005), training teachers to use effective commands increased students' level of

compliance and academic engagement. The authors operationalized effective commands as "commands that increase the probability of child compliance" (Matheson & Shriver, 2005 p. 203) Teachers were trained to use effective commands as well as increase their level of praise, and both changes contributed to positive student behaviors (Matheson & Shriver, 2005). The intervention involved a three-phase design which included a pre-phase prior to the training session, a phase after the teachers were trained to give effective commands, and a phase after the teachers were trained to give effective commands in combination with verbal praise (Matheson & Shriver, 2005). One benefit of implementing this intervention was that it was inexpensive, and it included strategies such as modeling, practicing, and providing feedback to each participating teacher (Matheson & Shriver, 2005). On the contrary, the authors did not provide details about activities that were used to teach teachers to appropriately use effective commands (Matheson & Shriver, 2005). For this reason, it would have been difficult to replicate the strategies used in this intervention. Furthermore, there were only three participating teachers and three participating students (Matheson & Shriver, 2005). In addition, the authors also did not thoroughly explain how teachers selected student participants; therefore, it would have been difficult to replicate the design. However, the authors acknowledged that principals recommended specific teachers to participate in the effective commands training intervention (Matheson & Shriver, 2005).

Despite some limitations, there were elements of the Effective Command Training that I could have used to development an intervention that addressed behavior. For example, an objective during a teacher training session could have required teachers to model and practice giving effective commands. Teachers could have also modeled

giving verbal praise, while facilitators could provide feedback. The behavioral consultation model used for this intervention was aligned with Hardiman (2012) which indicated that modeling appropriate behavior or enactment of material learned had the power to enhance long-term memory. Enactment of the appropriate use of effective commands was more effective than listening to someone present classroom management strategies to implement. In addition, the practice time that was allotted during the training sessions for effective commands were also aligned with research (Hardiman, 2012). Furthermore, repeated rehearsals allowed for teachers to commit strategies to memory (Hardiman, 2012).

Besides teaching appropriate expectations, giving verbal praise, and using effective commands, the use of technology also assisted teachers with implementing effective classroom management strategies to improve academic engagement and reduce disruptive behaviors. For example, Radley, Dart, and O'Handley (2016) used a Decibel 10th app to measure noise level in the classroom. Principals recommended that teachers participate in the Quiet Classroom Game if the teacher typically struggled with managing disruptive behaviors and had a loud classroom (Radley, Dart, & O'Handley, 2016). After using the Decibel 10th app over the course of the intervention while also rewarding the students for meeting their noise level goals, there was a reduction in disruptive classroom behaviors and noise level along with an increase in academic engagement (Radley et al., 2016).

There were advantages for implementing the Quiet Classroom Game. The benefits were that the intervention yielded positive results for academic engagement and student behavior while using technology. Incorporating technology was beneficial

because teachers were evaluated on their use of technology within my professional context. Furthermore, the measures used within this intervention to assess academically engaged behavior, disruptive behavior, and noise level were all valid and reliable; the authors also thoroughly explained the steps involved for the intervention and operationalized all variables. Though these were not reasons to implement this intervention, these reasons allowed for one to trust the evaluation of the intervention. The measures could have also been reused during my intervention instead of me creating an instrument to use. Behavior Observation of Students in Schools (BOSS) was the instrument used to measure academic engagement (Radley et al., 2016). The BOSS coding system that was used to determine academic engagement time was shown by Volpe, DiPerna, Hintze, and Shapiro (2005) to be reliable and acceptable. According to Volpe et al (2005) BOSS, there inter observer agreement for Crohen's kappa was between .93 and .98. This instrument was also valid and had been reused in other studies (Collins et al., 2016; Radley et al., 2016). In addition, the authors thoroughly explained how disruptive classroom behaviors were calculated. Fifteen-minute observation sessions were conducted while using a 10-second monetary time sampling procedure in which every student within a class was observed for 10 seconds (Radley et al., 2016). At the end of the 10 second period, the observers recorded if the student was disruptive or not (Radley et al., 2016). The authors used the following definition to determine if the student was being disruptive including: student out of seat, playing with objects, inappropriate vocalization, and manipulating other objects that he or she should not be manipulating (Radley et al., 2016). Because the authors were very detailed in their explanations of this intervention, it was feasible for me to implement it within my

professional context. The noise level was measured using a Decibel 10th app that was downloaded on an iPad (Radley et al., 2016). This provided for reliable results.

The concern with implementing the Quiet Classroom Game was that the study involved students in a first-grade classroom (Radley et al., 2016). My professional context included high school students. Furthermore, just because a classroom had a high noise level does not automatically mean that the students were disruptive or that they were not academically engaged. The teachers' classroom high noise level was one of the factors that caused the principal to recommend the teacher for the Quiet Classroom Game (Radley et al., 2016). However, the noise level for classes could have been high when there were several students within a class or whenever students were participating in collaborative learning opportunities. Another concern with implementing the Quiet Classroom Game was that the funds within my professional context were limited. It was not feasible to purchase iPads for teachers to download the Decibel 10th app or purchase the MotivAider device that was used to prompt the teacher to check the noise level in the classroom (Radley et al., 2016). Even though I was not able to implement all elements of the Quiet Classroom Game, there were parts of the intervention that I adopted to increase academic engagement time and reduce the numbers of disruptive behaviors. For example, I rewarded students for meeting behavior expectations.

Besides having issues with managing noise levels and classroom management, teachers also struggled with selecting the most appropriate classroom arrangement for desks such as rows, clusters, or circles. The arrangement of desks impacted teachers' ability to manage behavior. For example, teachers planned group activities to enhance students' communication skills and promote collaborative learning; this required teachers

to arrange desks into clusters. However, students tended to talk more frequently when their desks were arranged in clusters; therefore, facilitating group activities presented a challenge for teachers' classroom management. As a result, some teachers tended to arrange their classroom in rows instead of clusters to make managing students' vocalization easier. Classroom organization was important, because students tended to associate the arrangement of a class with specific activities. For example, when students entered a classroom that was arranged in clusters, they expected to be able to talk to their peers and work collaboratively; on the contrary, when students entered a classroom that was arranged in rows, they expected to work individually. Interventions such as The Good Behavior Game could be implemented to assist teachers with overcoming the challenge of managing misbehavior while facilitating group activities.

Similar to the Quiet Classroom Game, the Good Behavior Game was another intervention that provided students with rewards after exhibiting appropriate behavior. The Good Behavior Game was used to address students' level of hyperactivity, off-task behavior, and oppositional behavior while increasing academic engagement (Leflot, Lier, Onghena, & Colpinm 2010). Teachers arranged their classroom in clusters and provided each group with a set number of cards at the beginning of the class activity (Leflot et al., 2010). The teacher then removed a card from each group every time that the group engaged in off-task behaviors or exhibited disruptive behaviors (Leflot et al., 2010). At the end of the class period, students were rewarded if they had at least one card left; rewards included stickers or candy (Leflot et al., 2010). The results revealed that the teachers increased their level of praise, and students demonstrated more on-task behavior (Leflot et al., 2010). In addition, the students also reduced their level of excessive talking

without permission (Leflot et al., 2010). Thus, the Good Behavior Game was shown to be effective at reducing disruptive behaviors while increasing academic engagement. This intervention was a good fit for the student body at Excellence High School, because an important skill that the administration promoted was the development of communication and collaboration skills. Using the Good Behavior Game during group activities could assist with managing misbehavior and focusing on communicating appropriately.

Even though the Good Behavior Game had positive results, there were some elements of the intervention that impacted its generalizability to the context of Excellence High School. The first concern was that teachers were not designing lessons that involved group activities every day. A more appropriate intervention would prevent disruptive behaviors and promote on-task behavior regardless of the type of activity that a teacher planned. In addition, the Good Behavior Game was shown to be effective for second and third grade students, while the context of interest was a high school. High school students may not have had the same enthusiasm as elementary school students to complete the game. Therefore, additional research needed be explored that demonstrated the implementation of the Good Behavior Game in a high school. Furthermore, the population included 15 schools in Belgium and the design intervention allowed for the researchers to track students over a two-year period beginning at the start of their second-grade school year (Leflot et al., 2010). The context of the study and the length of the intervention was not appropriate for the context of interest. In addition, the researchers allowed students to use an instrument to rate their peers' hyperactive and oppositional behavior as a part of their evaluation of the impact of the Good Behavior Game (Leflot et al., 2010). Though elements of the intervention could be used within my professional

context, this form of evaluation was not appropriate, because parents would have had an issue with another child rating their child's behavior. However, Matheson and Shriver (2005) and the authors of the Good Behavior Game demonstrated that when teachers increased their level of verbal praise, students showed increased academic engagement time and a reduction in off-task disruptive behaviors (Leflot et al., 2010). Therefore, in addition to using rewards, I decided that training teachers to increase their level of praise would be another component added to my intervention to address behavior.

In addition to teaching teachers how to increase their level of praise, teachers also needed to be taught effective strategies for reducing the number of reprimands given or maintaining a balance between level of praise given and the frequency of reprimands. Pisacreta, Tincani, Connell, and Axelrod (2011) focused on increasing teachers' use of a 1:1 praise-to-behavior correction ratio. The authors trained urban middle school general education teachers to increase their praise-to-behavior correction ratio in the classroom (Pisacreta, Tincani, Connell, & Axelrod, 2011). The main questions asked by the authors were could training and additional feedback help teachers implement a 1:1 praise-to-behavior correction ratio, would the ratio reduce behavior problems in general level classrooms, and could increases in the ratio lead to improvements in classrooms where no teacher training had occurred (Pisacreta et al., 2011). The results from this study revealed that students' disruptive behaviors were reduced after teachers increased and maintained a 1:1 praise-to-behavior correction ratio (Pisacreta et al., 2011). This intervention added an additional component for my potential intervention; this included feedback being provided to the teachers following a training session. In addition, it also emphasized the significance of maintaining a balance between praising a student and

correcting inappropriate behavior to reduce students' disruptive behaviors. As a result of the teacher changing his or her behavior, there was a change in students' behavior.

Despite the additional components that this intervention added to the literature, there were some differences between the target population for the intervention and the context of Excellence High School. For example, the sample size for this research experiment included three urban middle school teachers who taught in the mid-Atlantic region of the United States of America. The middle school consisted of 1200 students who were 50% White, 31% African American, 18% Hispanic, 1% Asian, and 1% Native American (Pisacreta et al., 2011). This demographic breakdown was more diverse than the study body at Excellence High School which was composed of predominantly African American Students. Each class size ranged from 15 to 20 students, but the class sizes at Excellence High School ranged from 20 to 35 students. For this reason, it would have been more difficult for teachers within my professional context to maintain a 1:1 praise-to-behavior correction ratio with more students.

Despite this potential limitation, the authors were thorough in their explanation of variables measured and the procedure used to collect data. The dependent variables for the study were teacher praise, teacher behavior correction, and student disruptive behavior (Pisacreta, et al., 2011). Student disruptions included anything that disruptive the learning environment including being off task, out of assigned seat, and speaking without permission (Pisacreta et al., 2011). Data was collected three to five times per week in 20-minute intervals (Pisacreta et al., 2011). The first author for this research study met with teachers to train them by modeling how to implement praise-to-behavior correction (Pisacreta et al., 2011). The first author also provided performance feedback to

the teachers (Pisacreta et al., 2011). In addition to collecting the data with teachers who received training, data was also collected in three classes where the teacher did not have any training (Pisacreta et al., 2011). This suggested that the evaluation of the intervention adequately determined cause and effect, because a control group was used as a form of comparison for the treatment group.

Similar to Pisacreta et al. (2011) use of teacher training and performance feedback, Akalin and Sucuoglu (2015) used the performance feedback method and information sessions to determine if an intervention impacted teachers' classroom management skills, enhanced teacher characteristics, and improved students with special needs behavior. This article was based on the concepts that teachers could effectively implement classroom management strategies if they received sufficient information and received additional feedback during implementation. These authors asked research questions that had multiple parts. The first question inquired if an intervention program would be effective if it provided performance feedback and information sessions on classroom management techniques to teachers when considering teacher characteristics and target classroom management behaviors (Akalin & Sucuoglu, 2015). The second question inquired if the intervention program would affect students with special needs in terms of academic engagement and negative and positive behaviors (Akalin & Sucuoglu, 2015). The final question was does an intervention program that included information sessions and performance feedback have social validity (Akalin & Sucuoglu, 2015). This question also addressed the opinions of teachers and social comparison results after the intervention (Akalin & Sucuoglu, 2015).

Akalin and Sucuoglu (2015) measured constructs by conducting observations that were video recorded. Each construct was measured using a different observation form. The Teacher Behaviors Observation Form was used to measure the impact of performance feedback on targeted behaviors of teachers for individualization, use of transitions, and the frequency of rewarding students (Akalin & Sucuoglu, 2015). While reviewing the video recordings, the researchers completed the observation form by counting the number of times that the teacher correctly implemented targeted behaviors (Akalin & Sucuoglu, 2015). This allowed for a realistic documentation of what teachers demonstrated when implementing classroom management strategies. Teachers' use of preventive classroom management skills were measured with a Preventive Classroom Management Observation Form that determined the impact of the intervention program using 86 items that were subdivided into 13 major topics such as classroom rules, rewarding good behavior, giving cues, maintaining the attention of students, and more; teachers received one point every time they implemented these behaviors, but did not receive any points if they did not implement any strategies (Akalin & Sucuoglu, 2015). This form of measuring teachers' use of preventive strategies was valid and reliable. In addition, Akalin and Sucuoglu (2015) used an Eco-Behavioral Assessment System to assess student and teacher behavior outcomes after implementing the intervention program and used a Student Behaviors Observation Form to determine the results of the intervention on the outcomes for students with special needs regarding their positive and negative behaviors. Items on the observation form included specific behaviors; positive behaviors included students raising their hand, asking a question, and more while negative behaviors included students not remaining seated, excessive talking, and

disturbing others among other behaviors (Akalin & Sucuoglu, 2015). The final construct was measured using a Satisfaction Form to determine the opinions of the teacher participants concerning the appropriateness and effectiveness of the intervention program; items were measured using a Likert scale in addition to asking closed and open-ended questions (Akalin & Sucuoglu, 2015). Akalin and Sucuoglu's (2015) article revealed an increase in the correct implementation of classroom management strategies involving rewards, individualization, and transitions after participating in the intervention program that involved information sessions and performance feedback. This suggested that teachers could effectively implement classroom management strategies if they received the additional assistance and training. Findings also revealed an increase in preventive classroom management skills and teacher characteristics; for example, teachers' approval of appropriate behaviors increased while their disapproval of inappropriate behaviors decreased (Akalin & Sucuoglu, 2015). Students with special needs had a decrease in negative behaviors and an increase in positive behaviors and academic engagement (Akalin & Sucuoglu, 2015). In terms of social validity, teachers reported that the intervention was effective (Akalin & Sucuoglu, 2015).

Similar to the intervention completed by Akalin and Sucuoglu (2015), another example of an intervention that trained teachers to use preventive classroom management strategies and provided performance feedback was the Incredible Years Teacher Classroom Management (IY TCM) intervention. IY TCM intervention was implemented by Reinke, Stormont, Herman, Wang, Newcomer, & King (2014) to address the top 15% of disruptive students' behavior. The IY TCM intervention was different from Akalin and Sucuoglu's (2015) intervention that targeted students with special needs. IY TCM

showed a significant reduction in the number of disruptive behaviors and a reduction in the number of off-task behaviors (Reinke, Stormont, Herman, Wang, Newcomer, & King, 2014). In addition, the results showed a significant increase in the number of prosocial behaviors exhibited by these students (Reinke et al., 2014). The intervention also showed improvements for teachers' behavior. For example, teachers showed a reduction in the number of reprimands given and an increase in the amount of praise given (Reinke et al., 2014). Overall, the intervention led to increased academic engagement and a reduction in disruptive behavior.

Components of this intervention were appropriate for my professional context for a variety of reasons. One of the main reasons was the similarities between the population in the study and the population of interest. For example, IY TCM was implemented within schools that consisted of 76% African American students (Reinke et al., 2014). This was very similar to the context of Excellence High School which contained 85% African American students (*U.S. World News and World Report*, 2016). Furthermore, the schools were urban while Excellence High School was best described as urban characteristic due to it experiencing similar challenges as urban schools (Milner, 2012). These challenges included White flight that occurred when White residents left the city after more African Americans moved into the suburbs when the schools in a nearby city were placed on a "failing schools" list. At that time, families began to seek better educational opportunities.

Though White families were moving from the city, White teachers continued to teach at Excellence High School. These teachers experienced teaching in a predominantly White school that became predominantly Black. New policies needed to be implemented

to train new teachers and to train the teachers who had been at the changing Excellence High School how to interact with students from different backgrounds. This was one of the benefits of IY TCM. The purpose of IY TCM was to enhance teacher-student interactions while reducing disruptive classroom behaviors (Reinke et al., 2014). This intervention could have assisted teachers with meeting the expectations of the state of Alabama's teacher evaluation system. The Educate Alabama teacher evaluation system had five standards including: content knowledge, teaching and learning, diversity, literacy, and professionalism (Alabama State Board of Education, 2016). Teachers had to comply with this evaluation system each year. Implementing the IY TCM training as a professional development opportunity would have assisted teachers with meeting standards for teaching and learning and diversity. For example, standard 2.1 stated that the teacher should "design a classroom organization and management system built upon sound, age-appropriate expectations and research-based strategies for promoting positive behaviors" (Alabama State Board of Education, 2016). IY TCM training provided teachers with strategies to assist them with designing an appropriate classroom management system (Reinke et al., 2015). Standard 4.1 stated that a teacher should "develop culturally responsive curriculum and instruction in response to differences in individual experiences; cultural, ethnic, gender, and linguistic diversity; and socioeconomic status" (Alabama State Board of Education, 2016). The IY TCM training would have assisted teachers with becoming more culturally responsive due to the training enhancing teacher-student interactions (Reinke et al., 2014).

More specifically, the methods that the authors used to implement the IY TCM training were feasible and appropriate for my professional context. For example, the

training was spaced out to include a total of six full-day sessions (Reinke et al., 2014). According to Roediger and Pyc (2012), spacing of the training sessions allowed for long term retention of content material taught within the training sessions. This assisted teachers with remembering the material taught within a session instead of attending a meaningless workshop with content material crammed into a one-day session. This would have benefited the teachers within my context because it would have allowed them to attend a classroom management session once per month during district professional development days.

Not only was the design of the intervention feasible, but the strategies used within the sessions were appropriate for teachers within my context. For example, teachers were taught to implement praise, enhance problem solving skills, use incentives, decrease disruptive classroom behavior, and improve social competence (Reinke et al., 2014). Teachers collaborated with facilitators to receive performance feedback during the time between sessions to implement material taught during the training (Reinke et al., 2014). The strategies used within the sessions included role-playing and receiving performance feedback (Reinke et al., 2014). Role-playing enhanced teachers' long-term memory for using strategies (Hardiman, 2012). In addition, as shown in Akalin and Sucuoglu's (2015) study when teachers received performance feedback they improved their use of classroom management techniques. Furthermore, this intervention was grounded within Bandura's social learning theory (Reinke et al., 2014).

Overall, implementing some of the strategies used in IY TCM within my professional context helped address the underlying causes and factors for disruptive classroom behaviors including teachers' classroom management strategies and academic

engagement. Based upon the responses provided in the needs assessment results, teachers struggled with implementing preventive classroom management strategies such as posting rules, assigning seats, and teaching appropriate expectations. However, the results after implementing the IY TCM training yielded better student-teacher relationship, higher level of academic engagement, and fewer disruptive behaviors (Reinke et al., 2014). Similar to the Effective Command Training, the Good Behavior Game, and the Quiet Classroom Game, teachers who participated in the IY TCM training intervention increased their level of praise and implemented incentives or rewards. Increasing level of praise and using rewards to acknowledge students' behavior were the components that I included in my intervention. In addition, the format of the training was ideal for my intervention because it was spaced out throughout the intervention. Besides only focusing on teachers' behavior to increase academic engagement to improve students' behavior, an ideal intervention also needed to focus on targeting students' behavior.

Student Behavior and Classroom Management

Collins et al (2016) implemented the Class Pass Intervention with disruptive male students and later evaluated the intervention to determine the impact that it had on students' level of academic engagement. Students received passes that they used later to participate in an activity of their choice or to take a break from class activities. Participating teachers collaborated with students to determine rewards that they would be able to receive once they submitted the class passes. Overall, at the end of the 8-week intervention, these students showed an increase in academic engagement (Collins et al., 2016). The authors suggested that this intervention be used by teachers to address disruptive classroom behaviors for students who needed frequent monitoring instead of

writing a disciplinary referral (Collins et al., 2016). Changing how students were approached when they exhibited disruptive behaviors led to positive changes in student behavior.

While the Class Pass Intervention helped improve student behavior, the goal for my intervention was to prevent disruptive classroom behaviors using Tier 1 classroom management strategies. Despite positive results, the Class Pass Intervention was used as a Tier 2 level intervention which meant that it targeted students who have already been observed engaging in disruptive classroom behaviors (Collins et al., 2016). This intervention was too time consuming to implement as a Tier 1 level prevention strategy to address all students. Furthermore, the context that this study was implemented in was very different from the context of interest. For example, the population was 62% White, 18% Black, and the rest of the population was from other minority groups (Collins et al., 2016). On the contrary, Excellence High School consisted of 85% Black and 12% White students (*U. S. News and World Report*, 2016). Another disadvantage of this intervention was the multiple-gating procedure used to select student participants. The authors discussed the validity and reliability of this procedure; however, the researchers indicated that teachers nominated students who met a definition of low academic engagement (Collins et al., 2016). Teacher bias could have impacted the students selected to participate within the study. Only four male students were selected to participate in the study at the end of the multiple-gating procedure (Collins et al., 2016). Within my professional context, more male students needed assistance with controlling their behavior. There was a need for interventions that could also be effective with female students; therefore, a different intervention was more appropriate to implement at

Excellence High School. Despite these disadvantages, there were components of this intervention that could have been used in my intervention. For example, teachers could have collaborated with students to get their opinion for rewards that were given for appropriate behavior.

Besides using the Class Pass Intervention to target students with disruptive behaviors, another intervention that could have been used to teach students how to control their own actions included self-regulation interventions. Zimmerman (2000) defined self-regulation as a students' ability to think about their actions before acting on what they think, monitor their own performance, and reflect on their actions afterwards. Self-regulation could be applied to students' classroom behavior or academic achievement. Menzies and Lane (2011) listed three strategies that could have been taught to students to enhance their self-regulation skills; these included: goal setting, self-monitoring, and self-instruction. Self-monitoring was defined as one observing his or her own behavior and recording the behavior (Menzies & Lane, 2011). Students could have been trained to record their own behavior such as listening to the teacher lecture or give instructions, completing classwork assignments, remaining on task, and participating in activities (Menzies & Lane, 2011). Self-monitoring could have helped students regulate their own classroom behavior and academic engagement time. Self-monitoring could have also been used to help students assess their own academic performance, such as checking their answers for correctness. According to Menzies and Lane (2011), after students were taught to self-monitor their own behavior three participating students showed an increase in time on-task; students were praised and provided incentives for positive reinforcement. Recall that time on-task was an indicator of academic

engagement time, and students could not be engaged and disruptive simultaneously (Radley et al., 2016).

Another component of self-regulation was self-instruction. Self-instruction was defined as someone using language to regulate their own behavior (Menzies & Lane, 2011). This could be commonly referred to as self-talking (Menzies & Lane, 2011). Utilizing self-instruction as a strategy could have allowed students to think about how they should approach a problem situation, increase attention their span, cope with challenging situations, and use affirmation to acknowledge their individual successes (Menzies & Lane, 2011). The coping process used during self-instruction had three main stages which included: assessing the situation, controlling negative thoughts, and reinforcing positivity (Menzies & Lane, 2011). Intervention results revealed that students who used the self-instruction strategy were effective in using positive talk and they experienced a decrease in negative thoughts about mathematics; additionally, students experienced a significant increase in the number of mathematics problems answered correctly (Menzies & Lane, 2011). Overall, self-instruction was a strategy that could have been used to help students improve their academic performance (Menzies & Lane, 2011).

Goal-setting was the third strategy used in self-regulation. Typically, goal-setting was used as a strategy to help students monitor their academic performance; however, this strategy could have also been used to help students monitor their behavior. There were three stages for setting goals; these steps included: establishing a goal that within one's capability, creating a schedule to be used to accomplish the goal, and monitoring the progress for obtaining the goal (Menzies & Lane, 2011). Overall, the three components of self-regulation including self-instruction, self-monitoring, and goal-setting

could have been taught to students to help them learn to regulate their learning and behavior. Each of these strategies could have been implemented in an intervention within my professional context.

Furthermore, every intervention discussed provided insight for the components that should be included within my intervention to address academic engagement time to help reduce disruptive classroom behaviors. For teachers, these included training that taught teachers how to teach appropriate expectations, use effective commands, increase level of praise, reduce frequency of reprimands, use incentives, and obtain feedback from students concerning the rewards that are provided to them. The teacher training needed to be spaced out instead of massed, and the sessions needed to allow for teachers to role-play and model implementing classroom management strategies. Additionally, when targeting students, teachers needed to consult students to determine incentives to use similar to the Class Pass Intervention; teachers also needed to be trained to teach students self-regulation skills. An example of an intervention that included all of these necessary components was the School-Wide Positive Behavior Intervention Supports, which targeted teachers and students' behavior.

Teacher and Student Behavior

School-Wide Positive Behavior Intervention Support (SW-PBIS) targeted teachers and students and had been shown to improve school's climate and reduce number of referrals and suspensions (Swain-Bradway, Pinkney, & Flannery, 2015). There were three main levels of support for SW-PBIS which included a primary, secondary, and tertiary level of support (Swain-Bradway et al., 2015). The primary level of support targeted 80 to 90% of students, while the secondary level of support targeted the 15% of

students whose needs were not met by the primary level of support, and the tertiary level of support was used to target the top 5% of students with disruptive behavior (Swain-Bradway et al., 2015). There were seven main components used to implement SW-PBIS; these included: establishing schoolwide rules and expectations, actively teaching the rules and expectations, rewarding students who exhibit appropriate behavior, establishing consequences for students who violate school rules, reviewing disciplinary data to help with making decisions, obtaining administrative support for SW-PBIS, and obtaining district level support (Swain-Bradway et al., 2015).

Swain-Bradway, Pinkey, and Flannery (2015), explored the implementation of SW-PBIS in eight high schools and provided solutions to address the main challenges that these high schools experienced with the implementation of the intervention. Prior to implementing SW-PBIS, the school had to demonstrate a need for the intervention and a data team was formed; data team members collaborated to identify common problem behaviors displayed by students (Swain-Bradway et al., 2015). Furthermore, all team members reviewed current disciplinary policies and modified policies to align with SW-PBIS; members established a plan for targeting current problems (Swain-Bradway et al., 2015). Because there were issues with creating staff buy-in, it was imperative that participants approached the teaching staff by first acknowledging the positive actions taken to address student behavior before mentioning the actions that needed to be taken to address the problem behaviors (Swain-Bradway et al., 2015). In addition, some teachers did not think that it was necessary to reward students for demonstrating appropriate behaviors since they were in high school; to address this, one should calculate the time lost per number of referrals written to emphasize the importance of addressing behavior

(Swain-Bradway et al., 2015). Another common challenge that a research team experienced was securing administrator support for the intervention; when this occurred, it was important for the researcher to make a short list of easy ways that he or she could get the administrator involved (Swain-Bradway et al., 2015). In addition, some teachers experienced difficulties with giving out rewards or acknowledgement tickets; therefore, it was important for one to make things easier for the teachers by providing him or her with the rewards and tickets each week to distribute to the students (Swain-Bradway et al., 2015). Teachers also had an issue with teaching expectations; therefore, it was important that ongoing professional develop opportunities were provided for teachers and that students were allowed to get involved with creating the lessons that teachers used to teach expectations (Swain-Bradway et al., 2015). Another concern that data teams typically had was obtaining access to disciplinary data; a team member must develop a relationship with school personnel who were responsible for collecting specific types of data (Swain-Bradway et al., 2015). The last concern that individuals had when implementing SW-PBIS was they lacked the resources to purchase prizes for students; to address this issue, one created a list of free or inexpensive rewards that students liked to receive or one should seek donations from local businesses within the community (Swain-Bradway et al., 2015).

Overall, the literature provided a clear framework for implementing SW-PBIS in an urban high school. The benefit of this intervention was that it targeted teachers' behavior, and targeted individual students' behavior using different levels of support. Teachers attended professional development sessions, taught expectations, and rewarded students for exhibiting appropriate behavior. Implementing SW-PBIS addressed school

policies and teachers' classroom management skills which were microsystems within the bioecological systems model. Besides providing details for implementation, additional literature provided evidence that evaluated the effectiveness of SW-PIBS intervention.

Flannery, Fenning, Kato, and McIntosh (2014) assessed problem behavior among students over a three-year period and determined the effectiveness of School-Wide Positive Behavior Interventions and Supports (SW-PBIS). The authors' goal was to add to the limited data that studied the effectiveness of SW-PBIS, while the purpose of the study was to determine the effectiveness of the intervention on misbehavior at the individual level (Flannery, Fenning, Kato, & McIntosh, 2014). In addition, the authors also asked if school officials' commitment to the implementation of the program had an impact on behavioral problems changes (Flannery et al., 2014). Results from this study revealed that after the implementation of SW-PBIS the number of disciplinary referrals reduced significantly (Flannery et al., 2014). Fidelity of implementation was shown to be statistically significant for reducing behavior problems during the second and third year of the implementation of SW-PBIS (Flannery et al., 2014).

The data for this study was analyzed using a multilevel latent growth model. In addition to this model, descriptive statistics, Poisson regression, and Mann-Whitney U tests were used (Flannery et al., 2014). The sample population for this study included 36,653 students from 12 different high schools; four of the 12 schools did not have SW-PBIS and the other eight schools used the intervention (Flannery et al., 2014). Twenty-seven percent of students qualified for free or reduced lunch, while only between 13% and 52% of students in the sample were minorities (Flannery et al., 2014). The measures for this study included problem behavior and fidelity of implementation (Flannery et al.,

2014). Number of office disciplinary referrals was used to assess student's individual behavioral problems, while fidelity of implementation was measured using a 28-item tool designed for SW-PBIS (Flannery et al., 2014). The items assessed whether or not expectations had been established for behavior, reviewed if a reward system was created, determined if an organized management was set up, and assessed if schools had obtained district support for SW-PBIS implementation (Flannery et al., 2014).

In addition to the Flannery et al. (2014), Bohanon et al. (2012) analyzed a case study for the implementation of SW-PBIS in an urban high school using a change-point test analysis. SW-PBIS was implemented in three phases which included initial inquiry, formalized planning, and an implementation stage (Bohanon et al., 2012). During the initial inquiry phase, the researchers met with administrators and teachers to discuss components of SW-PBIS, reviewed office disciplinary referral data to assist with planning, and reviewed the three-tier intervention system (Bohanon et al., 2012). During the formalized planning stage, the data team met twice to create goals for reducing negative classroom behavior and hallway behavior, established school-wide expectations, planned celebrations for students who exhibited appropriate behavior, identified consequences for student misbehavior, planned orientations for each grade level, developed a schoolwide system for teaching appropriate behaviors, and planned ways to communicate results to the staff and the student body (Bohanon et al., 2012). During the implementation phase of the intervention, students attended a grade-level assembly where they received an overview of school-wide rules and expectations; these expectations were also taught by teachers using role-play, and the rules were posted around the school (Bohanon et al., 2012). Furthermore, teachers also presented students with

acknowledgement tickets whenever they exhibited appropriate behavior, and students submitted their tickets at the end of the week for prizes (Bohanon et al., 2012). They also participated in a school-wide picnic celebration at the end of the school year (Bohanon et al., 2012). As a result of this intervention, there was a decrease in the number of office disciplinary referrals written every year (Bohanon et al., 2012). Overall, when fewer office referrals are written, teachers were able to focus on teaching content material.

Conclusion

Based upon the interventions explored, an intervention that addressed teachers' classroom management skills that could be used to reduce disruptive behaviors in the classroom while increasing students' academic engagement time was selected. Though there were several options available to address this problem of practice to yield effective results, it was more beneficial to combine components from different interventions to create an intervention that was most appropriate for my professional context. The reason for this was some of the interventions were situated in a context that was not similar to my professional context. For example, the Quiet Classroom Game and the Well Managed Classroom interventions were not the most appropriate intervention to implement within a high school context, because the results from the intervention could only be generalizable to an elementary school. Furthermore, the Good Behavior Game was not most appropriate, because it was only used when students were participating in group activities. I was most interested in an intervention that could be used at any time regardless of the type of activity that students were completing. The Class Pass Intervention and self-regulation strategies were designed for a Tier 2 response to behavior problems which was a reactive strategy instead of a preventive strategy. The goal was to

implement a preventive classroom management strategy to avoid students exhibiting disruptive classroom behaviors. To add, the Effective Command Training and 1:1 praise to behavior correction were techniques that could be incorporated into any intervention. Furthermore, the IY TCM training curriculum was unavailable for review, thus it difficult to replicate with limited implementation steps provided.

For these reasons, instead of implementing a single intervention, components of different interventions were used in combination with the Positive Behavior Intervention Support (PBIS). PBIS had a professional development (PD) component and it was designed in a three-tier system. The strategies detailed in the Effective Command Training, the 1:1 praise to behavior correction training, and the Well-Managed Classroom Training were included in a PD for PBIS. Furthermore, the performance feedback component used in some of the interventions were implemented to support teachers during a PBIS intervention. The concept of providing praise to help reinforce positive behavior in the Effective Command Training and the 1:1 praise to behavior correction training was a component of PBIS, because students were constantly acknowledged for exhibiting appropriate behavior. Furthermore, the Good Behavior Game, Quiet Classroom Game, and the self-regulation techniques all provided rewards to students; rewarding students was a key component of PBIS. Because PBIS had three levels of support, the self-monitoring, self-instruction, and goal-setting techniques along with the Class Pass Intervention could be used as Tier 2 or Tier 3 levels of support while implementing PBIS. Overall, the techniques used were able to increase academic engagement time and reduce the disruptive classroom behaviors and ultimately reduce number of office disciplinary referrals written.

Chapter 4

Intervention and Evaluation Methodology

This chapter provides a brief review of my problem of practice followed by a theory of change for addressing the problem. Afterwards the hypotheses and the research questions are stated. The research design and evaluation design are discussed along with strengths and limitations of the designs. Furthermore, I provide descriptions of the participants that I had originally planned to recruit along with descriptions of measurements and instrumentations that would be used during the intervention. Additionally, the procedure and data collection process are described. To ensure that the intervention is implemented properly, fidelity of implementation measures are included. I also explain the expected outcome evaluations and describe the way that the data will be analyzed.

Intervention

Disproportionately high rates of expulsions and suspensions of students of color occurred due to disciplinary referrals written for disruptive classroom behaviors and defiance of authority. Recall that students could not be disruptive and academically engaged simultaneously (Radley et al., 2016). Furthermore, writing excessive disciplinary referrals that resulted in suspensions and expulsions did not change students' problem behaviors; instead it resulted in a racial disparity gap for addressing disciplinary actions and increased high-school drop-out rates (Skiba & Knesting, 2001). Therefore, the purpose of this research study was to implement Classroom-Level Positive Behavior Intervention Supports as a pilot intervention within the science department at the Excellence High School that addressed disruptive classroom behavior, educational

engagement, tardiness/attendance, school climate, and other factors that impacted the number of referrals written and number of suspensions. This intervention served as a baseline for the establishment of a School-Wide Positive Behavior Intervention Supports Program (SW-PBIS). SW-PBIS was comprised of seven components; these included: establishing schoolwide rules and expectations, actively teaching the rules and expectations, rewarding students who exhibited appropriate behavior, establishing consequences for students who violated school rules, reviewing disciplinary data to help with making decisions, obtaining administrative support for PBIS, and obtaining district level support (Swain-Bradway, Pinkney, & Flannery, 2015). These components were modified to best fit the needs of a classroom-level PBIS pilot study. For example, all of the components were included except obtaining district level support. Green-Leaf County School District allowed the principals at each school to decide how they used behavior interventions. For this reason, it was more important to have the principals' support at Excellence High School. The pilot study focused on the established school-wide expectations for academics, discipline, and attendance. The researcher used these categories to measure educational engagement and academic performance as subcategories of academics, to measure disruptive classroom behaviors, number of suspensions, and number of referrals as subcategories of discipline, and to measure tardiness as a subcategory of attendance. The participating teachers focused on these indicators at the classroom level.

Theory of Change

According to the theory of change, when classroom-level PBIS was implemented at Excellence High School, there would be a reduction in the number of disruptive

classroom behaviors and an increase in students' educational engagement which included cognitive, behavior, and emotional engagements. This assumption was supported by the results displayed in Reinke et al (2014) which revealed that there was a reduction in disruptive behaviors and off-task behaviors after implementing an intervention that targeted preventive classroom management strategies. Furthermore, Radley et al (2016) suggested that students could not be academically engaged and disruptive at the same time; therefore, if students were less disruptive they would become more academically engaged or educationally engaged overall. In addition, students would receive fewer suspensions and fewer tardies to class. Additionally, if PBIS was implemented at Excellence High School, there would be an increase in teachers' use of preventive and reward classroom management strategies, and a decrease in initial correction and later correction strategies such as disciplinary referrals. Akalin and Sucuglus's (2015) and Woodcock and Reupert (2013) revealed an increase in the correct implementation of classroom management strategies after teachers participated in an intervention program that taught effective preventive strategies.

Hypothesis

This intervention tested the following hypotheses:

$H_{1:}$ Teachers participating in this classroom-level PBIS intervention would write fewer disciplinary referrals than teachers not participating in the classroom-level PBIS intervention.

$H_{2:}$ Teachers would report an increase in preventive classroom management strategies and reward strategies, but a decrease in initial correction and later correction strategies.

H_3: Students would report an increase in educational engagement after participating in the intervention.

H_4: Teachers would report a reduction in students' frequency of disruptive classroom behaviors.

H_5: Students would experience a decrease in tardies after participating in the intervention.

H_6: Students would report a change in school climate at the end of the intervention.

H_7: Students would receive fewer suspensions.

Research Questions

RQ1: What was the effect of using classroom-level PBIS on students' (a) incidences of disruptive classroom behaviors, (b) educational engagement, (c) academic performance, (d) suspensions, (e) tardiness/attendance, and (f) view of school climate?

RQ2: What was the effect of using classroom-level PBIS on teachers' (a) number of disciplinary referrals written and (b) level of preparedness for classroom management?

RQ3: What was the effect of using classroom-level PBIS on teachers' use of (a) preventive classroom management strategies, (b) initial correction strategies, (c) reward strategies, and (d) later correction strategies?

RQ4: Was there a difference in number of disciplinary referrals written between teachers exposed to using classroom-level PBIS and teachers not exposed to classroom-level PBIS?

RQ5: What were the participating teachers and students' experiences with classroom-level PBIS?

Research Design

This study used a sequential, explanatory mixed methods design whereby the quantitative data collection preceded the qualitative data collection. The qualitative data was used to assist in the explanation and interpretation of the quantitative findings (Creswell & Clark, 2011). This approach was favored over other research designs due in part to the ability to maximize the strengths of both data collection approaches using qualitative data to support one's understanding and interpretation of the quantitative findings. This was especially critical in the process of a 6-weeks classroom-level PBIS intervention where there was little research around the short-term changes in the school environment on the way to the long-term goals.

Evaluation Design

A Naïve comparison group design in combination with a pre-test and post-test component was used. This design was a very simple design that was used to determine the impact that the treatment had on the treated and untreated groups by using statistical means (Henry, 2010). For this reason, it was expected that administrative data would have been used to calculate the total number of referrals written by teachers in the treatment group and the comparison group. The researcher initially planned to enter this data in SPSS software to calculate the mean number of referrals written (Henry, 2010). Afterwards the mean number of referrals written by teachers in the comparison group would have been subtracted from the mean number of referrals written by teachers in the treatment group (Henry, 2010). In addition, a simple regression would have been used to

generate the same results if the administrative data was provided to the researcher (Henry, 2010). These tests would have been run to provide an estimate of the program impact (Henry, 2010). The pre-test and post-tests were added to the Naïve design so that the number of disciplinary referrals written prior to the intervention could have been calculated. This was supposed to be used to determine change throughout the intervention.

The intervention took place within one high school that had 55 teachers. This sample size was too small to be used in a random experimental design that was typically extremely large and included multiple schools. Furthermore, the treatment group only included science teachers. It was not feasible to match the six teachers in the science department to other teachers in the school; therefore, the matching design was eliminated (Henry, 2010). The regression discontinuity design required a quantitative index to be used to assign participants to groups which was not possible because teaching assignments (i.e. being a science teacher) automatically determined who would be participating in the treatment group instead (Henry, 2010). Furthermore, the interrupted time-series design was not appropriate, because the intervention did not occur as a longitudinal study that provided data for all teachers before and after the intervention (Henry, 2010). Based upon the outcomes measured and the factors mentioned, the Naïve comparison design was most appropriate.

Strengths and limitations of the design. Due to the Naïve comparison design being the most basic and least complex comparison design, it was highly likely that the impact results of the program could be inaccurate (Henry, 2010). It was possible that the impact of the program was due to something other than the treatment, and selection bias

posed a potential threat to internal validity (Shadish, Cook, & Campbell, 2002). Furthermore, omitted variable bias could have been an issue, because covariables or control variables such as teachers' years of experience could not be controlled when using a Naïve comparison design (Shadish et al., 2002). This was an issue, because other variables that were related to the outcome (i.e. number of disciplinary referrals) could not be accounted for (Shadish et al., 2002).

However, despite the limitations listed, there were strengths with using a Naïve comparison design in combination with a pre-test and a post-test. Having a pre-test allowed for one to determine the differences between both groups prior to the intervention, and it assisted with understanding the variable of interest (i.e. number of disciplinary referrals) prior to treatment (Shadish et al., 2002). The pre-test also assisted with reliability (Shadish et al., 2002). Having a pre-test and a post-test also allowed for one to determine the change that occurred within each group over the course of the intervention as well as determine the impact that the intervention had on the treatment group. Adding a pre-test to the design also allowed the amount of bias to be reduced and it allowed for attrition to be compared (Shadish et al., 2002).

Even though adding a pre-test had advantages, there was still a threat of selection-regression which occurred when the participants in the treatment group and comparison groups were from different populations (Shadish et al., 2002). Furthermore, selection-history was also a possibility, because events occurred within the context of interest between the time of the pre-test and the post-test that could have affected participants in each group (Shadish et al., 2002). Despite being able to state the impact that occurred, stating causal inferences was not possible.

Participants

During a departmental meeting, every teacher within the science department was asked to participate in the treatment group for classroom-level PBIS. This included six teachers: two male teachers and four female teachers including the researcher. Four of the teachers who were asked to participate were African American and two of the teachers were White. Of these six teachers who were asked, one teacher opted not to participate while the other five teachers agreed to participate and they signed an informed consent form. At the start of the intervention, the treatment group included two males and three female teachers. One of the male teachers became sick during the intervention which caused him to miss a week of the intervention. This yielded low participation; therefore, he was removed from the study.

The comparison group included math teachers. During the first week of the intervention, the entire department was invited via email to participate in the study. This included eight teachers, four males and four female teachers. Three of the teachers were White and the other five teachers were African American. Of the eight teachers invited to participate, seven teachers agreed to participate and completed an informed consent form. Of the seven teachers who agreed, one teacher was removed due to not providing data requested. This resulted in six math teachers including three males and three females.

Every student who was assigned to a participating math and science teacher during the Spring semester were supposed to receive a parental opt-out form. Students in math classes served as the comparison group while students in the science classes served as the treatment group. Because some students were enrolled in a participating math and science teachers' classes, a third group was developed. All grade levels were included in

the intervention. All students within either of these classes were supposed to receive a parental opt-out form in the gymnasium prior to the start of school; however, this was not effective, so students received a parental opt-out form from their math or science teacher. At the start of this intervention, there were 582 student participants who did not return the parental opt-out form. Only three students returned the parental opt-out form. Of the 582 participants, 264 completed the pre-questionnaire yielding a 45% response rate. Due to one science teacher not completing the intervention, the number of participating students decreased from 582 students to 514 students by the end of the intervention. A total of 280 of the remaining 514 students completed the post-questionnaire yielding a 54% response rate.

Measurements/ Instrumentations

Three instruments were used to examine the effectiveness of the intervention. These instruments included teacher surveys, student surveys, and teacher interview protocol. It was also intended for a student focus group protocol to be used as well, but this did not occur due to the researcher's maternity leave. The following variables were measured: demographic information, academic performance, educational engagement, school climate, tardiness/attendance, disruptive classroom behaviors, initial correction strategies, later correction strategies, reward strategies, preventive strategies, and level of preparedness for classroom management. The researcher also planned to measure total number of disciplinary referrals written by math and science teachers as well as measure the suspensions received by students in math and science courses; however, there were inaccuracies concerning the number of referrals written by each teacher and the administrators did not provide suspension data. The suspension data was also inaccurate,

because some students' disciplinary record did not reflect their assignments to In-School-Suspension during tardy sweeps.

Demographic information for teachers were collected when the teachers completed a survey (see Appendix H for teacher questionnaire). Student's demographic information was also collected using a survey (see Appendix I for student questionnaire). Demographic items for teachers included: race (African American, White, Asian, more than one race, or other), gender (male, female), age, education level (bachelor's, master's, education specialist, doctorate), years of teaching experience, and level of preparedness in the area of classroom management. Demographic items collected for students included: race, gender, grade level, grade point averages, family structure, and economic status (free or reduced lunch status).

The instrument used to measure preventive classroom management strategies, reward strategies, initial correction strategies, and later correction strategies was similar to the Survey of Behavioral Management Practices (SOBMP) developed by Woodcock and Reupert (2013), but the researcher only included questions listed within the original researchers' article. The validity of this instrument was assessed by the original authors during a pilot study and feedback was provided for corrections to be made; in addition, the Cronbach alpha was higher than 0.7 for each subscale that measured each variable (Woodcock & Reupert, 2013).

Furthermore, students' disruptive classroom behaviors were measured using a teacher survey developed by the researcher. The purpose of developing questions to measure disruptive classroom behaviors was to ensure that the questions were

representative of the operational definition of disruptive classroom behaviors as described within the context of Excellence High School.

In addition, teachers' level of preparedness was measured using a single item from a survey developed by Koehler, Feldhaus, Fernandez, and Hundley (2013); this instrument contained six questions on a scale that measured teachers' perception of preparedness in different areas. The validity of the scale was assessed during a pilot study (Koehler et al., 2013). The researcher planned to assess the reliability of this item prior to the intervention to determine its reliability with participants at Excellence High School. This single item was included on the survey created by the researcher.

The INow Database analysis system and the Graduation Tracking System were supposed to be used to measure number of office referrals written by each teacher, number of out-of-school suspensions per student, number of tardies, and academic performance. However, teachers' frequency use of office disciplinary referrals was assessed on the teacher questionnaire due to accuracy issues with the database for number of office disciplinary referrals. The database was also not used to measure suspensions due to data not being entered into the database by administration. On the contrary, the INow Database analysis system was used to measure students' number of tardies and their academic performance. The validity and reliability information for this instrument was not provided; however, the database was a state-wide mandated database system that was used by all public schools in the state of Alabama. This database calculated grade point averages, tallied tardies and absences, and tallied referrals and number of out-of-school suspensions whenever the information was entered into the system.

Educational engagement was measured using a student questionnaire. The Educational Engagement Teen Survey was developed by Child Trends for the Flourishing Children Project. The authors of this scale tested the reliability and observed a Cronbach Alpha of 0.72 which suggested that the scale was reliable (Child Trends, 2017). This scale was also appropriate because it had been used with national samples of teens between the ages of 12 and 17, which included the age range of high school students at Excellence High School. Furthermore, the authors showed concurrent validity with grades, depression, fighting, and smoking (Child Trends, 2017). There was a decrease in the percentage of students who experienced depressive symptoms, participated in fights, and engaged in smoking, but an increase in the percentage of students with higher grades (Child Trends, 2017).

School climate was measured using a student questionnaire. The school climate survey items were developed by La Salle, McIntosh, and Eliason (2016) for an administration manual on school climate for Positive Behavioral Interventions and Supports. See Appendix L to review correlations of items on the scale.

Procedures and Data Collection

Intervention

After exploring other behavior interventions, the decision was made for this intervention to range from 6 to 8 weeks in length. This was similar to the length of time for a class-wide positive behavior support intervention completed by Närhi, Kiiski, Peitso, and Savolainen (2015). For example, the authors conducted a pilot study that lasted for 2 months after completing a one-time training consultation for 3 hours (Närhi et al., 2015). The authors also measured similar variables such as disruptive behaviors.

Furthermore, Collins et al (2015) conducted a Class Pass Intervention within an urban high school with similar demographics as Excellence High School for 6 to 8 weeks. The training conducted for the Class Pass Intervention was 30 minutes for a one-time training session (Collins et al., 2015). Even though these behavioral interventions only included one training session, the researcher intended to space 2 training sessions out over the 6 to 8-weeks intervention to include a tiered approach for addressing behaviors. However, due to the intervention lasting 6 weeks and participating teachers needing more assistance with implementation of the Tier 1 strategies taught during the first PD session, the researcher decided to use a data team meeting to provide additional assistance instead of completing the second PD.

Science teachers participated in a 2.5-hour professional development (PD) session on using classroom-level PBIS during the first week of March 2018. This session provided an overview of the intervention and explored Tier I PBIS strategies. At the start of the session, teachers completed an informed consent form. Teachers also completed a pre-test survey that included demographic information and items to assess classroom management strategies used. Teachers completed this same survey at the end of April.

During the PD, teachers discussed specific classroom management strategies, and learned when it was appropriate to distribute tickets to students for behaviors. Furthermore, teachers discussed the expectations for academic performance, academic engagement, behavior, and attendance. Teachers also collaborated to make a list of the top five behaviors that needed to be addressed during the intervention. They also explored restorative disciplinary strategies for possible consequences for inappropriate behavior, and they collaborated to create universal consequences. Additionally, the

teachers also completed an academic performance sheet and submitted an attendance report for each of their classes.

After the training, participating teachers implemented a lesson plan that included the new classroom rules, policies, and procedures and during the lesson teachers explained the intervention to students. After this lesson, teachers began to distribute reward tickets for students' behavior, academic performance, academic engagement, and attendance. Students were instructed to deposit their tickets in a central location within the teachers' classroom to be considered for a drawing for a reward. The researcher collected this data at the end of every week for the duration of the intervention. Winners were announced on Mondays, and students' names were posted on a winners' chart that included what they were acknowledged for. Throughout the intervention, teachers were supposed to receive additional one-on-one coaching and feedback sessions at the end of each week to review the strategies to be implemented within the intervention and to ask questions that they had about behavior problems. However, this did not consistently happen due to teachers not being available on Fridays. Teachers also participated in one data team meeting. According to Yeung and colleagues (2016) it was imperative that teachers received ongoing technical assistance and coaching. For this reason, the researcher provided ongoing technical assistance to the participating teachers by providing them with tickets each week, supplying them with the rewards, making the posters for their classrooms, and by providing them with a ticket deposit box. Furthermore, coaching was provided as often as requested by the participating teachers.

Furthermore, the researcher emailed every math teacher to ask for their voluntary participation in the comparison group at the beginning of March. Every math teacher

received a hard copy of the informed consent form. The researcher collected the informed consent forms from teachers by the end of the week that the email was sent. During the second week of March, the researcher collected pre-test surveys from participating math teachers and students. The researcher also collected attendance reports and academic performance sheets from the participating math teachers.

Initially, the researcher planned for the treatment group and an administrator to meet to review disciplinary data during data team meetings; however, due to a lack of availability, administrators did not participate in data team meetings. This led to the researcher reviewing teachers' implementation of the agreed upon consequences for the top 5 behavior issues and reviewing teachers' distribution of tickets data to discuss if teachers were acknowledging students for their academic performance, academic engagement, behavior, and attendance. Technical assistance with tickets and sample behavior paragraphs were also provided to teachers, and we discussed the frequency of specific behavior issues (see Appendix P for sample paragraphs).

At the end of the semester, each teacher was emailed interview questions to complete based upon the analysis of quantitative data (see Appendix E for Teacher Interview Questions). Additionally, all students who did not receive an In-School-Suspension, Out-of-School Suspension, an office disciplinary referral, or have more than three tardies were invited to participate in a celebration.

Fidelity of Implementation

According to Dusenbury et al (2003), fidelity of implementation was defined as the degree to which participants implemented the program as the developers intended. This was the working definition that was used for the classroom-level PBIS intervention

that was implemented by science department teachers at Excellence High School. Furthermore, Dusenbury et al (2003) listed five ways in which fidelity could be measured including: adherence to the program, participant responsiveness, quality of the program delivery, program differentiation, and dose. Adherence to the program, dose, and participant responsiveness were the most applicable ways to measure fidelity for PBIS. These selected measures of fidelity of implementation were consistent with the activities listed in the Logic Model in Appendix D. For example, teachers participated in a professional development (PD) session. Teachers and administrators were supposed to serve as data team members to discuss the disciplinary data that was supposed to be provided by an administrator. Furthermore, teachers distributed reward tickets to students who displayed appropriate behavior, and students participated in a celebration.

Based upon these activities, high fidelity was defined as 80% of science department teachers attending the PD session, while low fidelity was defined as less than 80% participation from science teachers. In addition to this dose, administrators' attendance at the data team meeting was also monitored; high fidelity was defined as an administrator attending 80% of data team meetings throughout the course of the intervention. Low fidelity occurred when an administrator attended fewer than 80% of data team meetings. Furthermore, to measure adherence, high fidelity from teachers was described when 80% of teachers distributed reward tickets to students throughout the week, while less than 80% was low fidelity of implementation. Besides measuring the dose for teachers and principals and measuring the adherence of teachers, students' responsiveness was also measured. For example, 80% of students attending the reward celebration for good behavior was an indication of high fidelity, while anything less was

low fidelity. The decision to base high fidelity of implementation at 80% was based on prior research that suggested that this percentage indicated an appropriate participation when implementing the intervention (Flannery, Sugai, & Anderson, 2009).

Indicators of fidelity of implementation. The indicators listed in Table 4.1 were selected based upon prior research that suggested that these indicators were significant when implementing classroom-level PBIS to fidelity. Teachers' attendance at PD sessions was important during the process of the intervention, because it assisted with teachers gaining knowledge about the framework used for the intervention. Furthermore, teachers' on-going distribution of the reward tickets suggested that teachers were supportive of the intervention. According to Flannery, Sugai, and Anderson (2009), implementing an acknowledgement system was one of the factors that affected a successful implementation. In addition, principal's attendance at monthly data team meetings was included as an indicator of fidelity, because principals were needed to provide updated disciplinary data to the PBIS committee to assist with targeting specific behaviors. Yeung, et al (2016) suggested that principal's support of PBIS and assistance with promoting effective use of disciplinary data while attending data team meetings assisted with higher fidelity and long-term sustainability. Overall, students should have been able to explain what PBIS was and should have benefited from the celebration if they behaved appropriately. Students should have also been aware of and involved in school-related activities for PBIS.

Table 4.1

Data Collection Matrix

Frequency Indicator	Data Source(s)	Data Collection Tool	Frequency	Responsibility
Teacher Attendance at Professional Development Sessions for PBIS (dose)	Teachers	PBIS Professional Development Sign-In Sheet	Once per month	Researcher
Ongoing Distribution of Reward Tickets (adherence)	Teachers	Tiger Bucks/Reward Tickets	Weekly	Researcher
Principal Participation in Data Team Meetings (dose)	Principals	Data Team Meeting Attendance Sheet	Monthly	Researcher
Students' Participation in PBIS Celebrations (responsiveness)	Students	Celebration Approval List and Admission Tickets	Once per semester	Researcher

Teacher attendance. Components of the intervention included a PD session to teach teachers how to implement the intervention. To measure dose as an indicator of fidelity, teachers signed a sign-in sheet when they entered the PD session. The sign-in sheet served as a data collection tool. Therefore, the researcher collected teachers' attendance data during one PD session.

Teacher distribution of tickets. Another component of the intervention included teachers' acknowledging students for displaying appropriate behavior, academic engagement, improved attendance, and improved academic performance. Tiger reward tickets were designed prior to the start of the intervention and these tickets served as acknowledgement/reward tickets (see Appendix O for tickets). Each reward ticket included a space for the teacher to write his or her name, the students' name, and a space for teachers to indicate whether the student was being acknowledged for their behavior, attendance, academic performance, or academic engagement. Students deposited these

tickets into a locked deposit box weekly to have their name entered in a drawing to win a prize. For this reason, tickets served as a data collection tool that the researcher collected and tallied each week. This allowed the researcher to determine teachers' adherence.

Principal's participation/attendance. One data team meeting was held with intents to review students' disciplinary, attendance, and academic performance data. Because principals were the only faculty members who had access to disciplinary data, their attendance at data team meetings was important. To measure dose as an indicator of fidelity, principals would have signed the sign-in sheet at the data team meeting if they had attended. The researcher was responsible for collecting this data; therefore, the sign-in sheet served as a data collection tool.

Students' participation in celebrations. Students' responsiveness was a measure of fidelity that was measured by students' participation in a celebration at the end of the intervention. Because behavior celebrations were hosted at the school to acknowledge students for displaying appropriate behavior; students received an invitation ticket for their entrance to the celebration. The list of approved students was used to create the tickets. Therefore, this approved list served as the tool used for students' responsiveness. The researcher was responsible for ensuring that participating students received an admissions ticket. According to Swain-Bradway, Pinkney, and Flannery (2015), strategies taught to teachers during the PD session should be effective in targeting the behavior for 80% to 90% of all students. For this reason, the researcher expected 80% of participating students to attend school-wide celebrations.

Outcome Evaluations

The short-term outcomes for teachers included: increased level of preparedness for classroom management strategies, increased use of reward strategies and preventive classroom management strategies, and lower frequency use of initial correction and later correction strategies; while the short-term outcomes for students were fewer disruptive classroom behaviors and fewer tardies. The medium-term outcomes were fewer number of referrals written, fewer out of school suspensions, and increased educational engagement. The long-term outcomes were increased teaching time, higher academic performance, an improved school climate, and a reduction in the racial discipline gap.

Data Analysis

Quantitative data was collected to answer question number one. What was the effect of using classroom-level PBIS on students' (a) incidences of disruptive classroom behaviors, (b) educational engagement, (c) academic performance, (d) suspensions, (e) tardiness/attendance, and (f) school climate? Teachers' pre and post surveys were used to analyze the mean for the frequency of incidences of disruptive classroom behaviors. The researcher used academic performance sheets that were completed by teachers using the INow Database Analysis System to measure change in class averages. The data was displayed in line graphs. Teachers' attendance reports from INow were used to measure tardiness; this data was categorized for zero tardies and a category was created for every third tardy that students accrued. This data was displayed in bar charts. The data for suspensions was not valid and the information was never provided by the administration, thus data was not available for analysis. The researcher used the data collected from students' pre and post-tests to measure students' educational engagement and students'

perceptions of school climate. Independent samples t-tests were run for educational engagement and school climate to determine the effects of the intervention on students. This data was also used to generate simple regressions for educational engagement and school climate.

Quantitative data was also used to answer the second question. What was the effect of using classroom-level PBIS on teachers' (a) number of disciplinary referrals written and (b) level of preparedness? Science teachers were asked about their use of referrals during the interview. The data obtained from the teachers' pre-test and post-test was also used to assess level of preparedness for classroom management. This data was analyzed using descriptive statistics, mean.

Quantitative data was also analyzed to answer the third research question. What was the effect of using classroom-level PBIS on teachers' use of (a) preventive classroom management strategies, (b) initial correction strategies, (c) reward strategies, (d) later correction strategies? The quantitative data gathered from the pre-test and post-test were entered into excel to calculate the mean frequency use of each of these strategies.

Quantitative data was also analyzed to answer the fourth research question. Was there a difference in number of disciplinary referrals written between teachers exposed to classroom-level PBIS and teachers not exposed to PBIS? Because the administrators did not consistently input teachers' names into the INow database system whenever teachers wrote a disciplinary referral, the report was not used to assess referrals due to potential inaccuracies. Instead, the researcher used pre and post-test items that required teachers to self-report their frequency use of office referrals. The mean frequency use was calculated using excel.

The final research question was answered using qualitative data. What were the participating teachers and students' experiences with using classroom-level PBIS? The researcher emailed interview questions to teachers. The researcher made comparisons between the responses received and used teachers' responses to explain the quantitative data analyzed. A summary matrix in Table Q1 provided an overview of each research question and the expected outcomes (see Appendix Q for summary matrix). The matrix also aligned each question with the variables that were measured, and it included the data sources that were used throughout the intervention.

Chapter 5

Findings, Discussion, and Implications for Practice

This chapter presents the findings of an evaluation focused on the implementation of a Classroom-Level Positive Behavior Intervention Supports (PBIS). The fidelity of implementation evidence is presented through a process evaluation, and the research findings are organized by research question. This study explored the effects of using classroom-level PBIS by high school science teachers on teachers' classroom management strategies and students' behavior. Throughout a 6-weeks intervention, several goals were addressed. The main goal was to increase teachers' use of preventive and reward classroom management strategies while decreasing their use of initial correction strategies and later correction strategies. An additional goal was to decrease incidences of disruptive classroom behaviors, tardies, and suspensions while increasing students' educational engagement, academic performance, attendance, and school climate. The research questions were formulated to reflect these goals.

RQ1: What was the effect of using classroom-level PBIS on students' (a) incidences of disruptive classroom behaviors, (b) educational engagement, (c) academic performance, (d) suspensions, (e) tardiness/attendance, and (f) view of school climate?

RQ2: What was the effect of using classroom-level PBIS on teachers' (a) number of disciplinary referrals written and (b) level of preparedness for classroom management?

RQ3: What was the effect of using classroom-level PBIS on teachers' use of (a) preventive classroom management strategies, (b) initial correction strategies, (c) reward strategies, and (d) later correction strategies?

RQ4: Was there a difference in number of disciplinary referrals written between teachers exposed to using classroom-level PBIS and teachers not exposed to classroom-level PBIS?

RQ5: What were the participating teachers and students' experiences with classroom-level PBIS?

Process of Implementation

The intervention was implemented in March and ran through May, covering the fourth quarter of the school year. Based upon prior research, the length for behavior interventions ranged from six to eight weeks with a short study, and years with a longitudinal study. Given the research on this particular approach and confirmation of the generally accepted time parameters, this intervention ran for 6 weeks.

The intervention began the first week of March with science teachers attending a 2.5 hours professional development session on using PBIS in the classroom. During the professional development session, the researcher provided the teachers with information regarding the problem concerning disruptive classroom behaviors, explained the evidence to support the problem, discussed causes and factors for disruptive behaviors, discussed the needs assessment findings for students and teachers, as well as provided teachers' and students' perspectives on disruptive behaviors to give teachers a sense of why the intervention was significant. Afterwards, the researcher explained the PBIS framework and provided evidence to show that PBIS had been effective in the areas of attendance,

behavior, and academic performance. The researcher provided definitions for the intervention targets that included: behavior, academic performance, academic engagement, and attendance. There was also a review of the timeline for the intervention

After the researcher explained this information, teachers participated in a group activity in which they compared and contrasted their classroom rules and expectations. Teachers then agreed on universal classroom rules and expectations. The group activity was followed by the researcher discussing the types of classroom management strategies: initial correction strategies, reward strategies, prevention strategies, and later correction strategies. After learning about the types of classroom management strategies, teachers participated in a brainstorming activity in which they listed their top five most common types of disruptive classroom behaviors, listed the typical consequence given, determined the type of classroom management strategy they were using, and determined if it was a restorative approach. Afterwards, teachers compared their lists and they collaborated to determine the most challenging behaviors to address.

All of the initial five participating science teachers agreed that they had issues with tardiness, cell phone violations, students being out of their seats without permission, students blurting out answers or talking without permission, and students arguing with their peers. The teachers then agreed upon consequences for each of these behaviors. Students would have to write 25 paragraphs for tardies after they accrued three tardies, write 25 paragraphs for argumentative classroom behavior on the same day that the argument occurred, have their cell phones confiscated and submitted to the main office for a parent to pick up, and do 25 push-ups or squats at the end of class on the same day that the student was out of his or her assigned seat without permission or talking without

permission. These consequences were agreed upon, because they allowed for an immediate consequence, but these particular consequences reduced the chances of a student receiving an office disciplinary referral that would result in a suspension. The goal of the consequences was to have a restorative approach instead of a punitive approach. For example, instead of a student going to in-school-suspension (ISS) for having three tardies they wrote paragraphs that explained why it was important for them to be on time for class now just as they would need to be on time for a job later in the future. The same concept was applied for having students to write paragraphs for argumentative behavior. Instead of receiving a referral that would result in suspensions, students would have to write about the negative effects that their behavior had on the learning environment (See Appendix P for sample paragraphs).

In addition to this activity, teachers were also trained on the process for distributing tickets. When teachers distributed an acknowledgement ticket, they had to write the students' name and indicate if the behavior being acknowledged was for academic performance, attendance, behavior, or academic engagement. The teacher was also required to put the date and their signature on the ticket. Teachers told their students to submit their tickets in the drop-box that the researcher provided. The teachers also submitted their tickets every Friday after completing the drawing. The researcher then provided the teachers with an appropriate gift for the winning student. Student winners were announced on Mondays, and students' names were posted in the class so that everyone would know who the winner was from the previous week.

Process Evaluation

Since the intervention began in March rather than the beginning of the school year when parents received forms to sign, there was an issue with the distribution of parental opt-out forms. Initially the principal approved for the researcher to distribute the forms to students in the gymnasium prior to the start of the school day. This was ineffective, because some juniors and seniors reported to school late due to their participation in off-campus dual enrollment courses. Additionally, some students rode buses that tended to arrive on campus later than others which gave them minimal time to eat in the cafeteria. Typically, students reported to the gymnasium or the cafeteria prior to the start of school. After they ate in the cafeteria, they reported to the gymnasium. For this reason, some of the students who were in the treatment group or comparison group were not able to report to the gymnasium to pick up a parental-opt out form. Additionally, some students were too shy to come to the center of the gymnasium to obtain a form when their names were called, so some students came to the researchers' classroom to get a form instead. Because of this issue, the researcher compiled a list of students in each participating math and science teachers' class who did not receive a parental-opt out form and asked teachers to distribute the forms to their students. This increased participation.

There were additional challenges in the data collection process once parental permissions and student assent was received. The distribution of pre-intervention questionnaires was interrupted due to the English Language Learners' standardized testing day and the "National Walk-Out Day" that raised awareness against gun violence. On this particular day, the bells were turned off to avoid disturbing the students while they were testing. This interfered with an announcement being made over the intercom

for math and science students to report to the auditorium during an advisory period for students to complete the pre-questionnaires. This resulted in a 45% response rate for the pre-intervention questionnaires. Students were either testing, participating in the walk-out, or sitting in a teachers' classroom who did not remember to send them to the auditorium. As a result, the researcher gave the math teachers a list of the students' names who needed to respond to the questionnaire and asked them to report to the researchers' class during her planning period. The process for distributing post-questionnaires was easier, because the researcher gave the list of students' names to the participating math and science teachers and asked them to distribute the questionnaires. Despite this being more organized, when the post-questionnaires were distributed several school-related activities occurred such as prom, senior class day, end of the year field trips, and global scholars testing. This impacted the teachers' ability to distribute questionnaires to every student due to absences resulting in a 54% response rate.

Besides the challenges with the distribution of parental-opt out forms and the distribution of pre and post-intervention questionnaires, the researcher did not conduct the second professional development session that was planned to teach Tier 2 classroom management strategies. Several factors contributed to this change. One reason was due to the length of the intervention being reduced from four months to six weeks. Additionally, science teachers needed to review their academic performance data, attendance data, and acknowledgement data, as well as discuss their progress with implementing the Tier 1 strategies. For these reasons, the researcher held a data team meeting instead of a second PD session. During the data team meeting, the researcher provided each science teacher with a report of their distribution of acknowledgement tickets. This allowed the teacher to

review what they were acknowledging students for. The teachers also discussed their implementation of the consequences to address the five main target behaviors, and the teachers discussed the academic performance of each of their classes. Furthermore, the teachers discussed their attendance data to determine if there was a reduction in tardies for their classes. The researcher also provided each teacher with additional tickets and print-outs of the tardy and behavior consequence paragraphs.

Additionally, due to a lack of participation from administrators regarding them not being available to provide academic, disciplinary, and attendance data from the Graduation Tracking System, the researcher relied on teachers for data. The teachers printed their INow screen for attendance data and they self-reported their disciplinary data. Additionally, teachers used their gradebook in the INow database to complete an academic performance sheet.

Initially, the researcher planned to have weekly meetings on Fridays with each participating science teacher to discuss their progress with the intervention and student behavior; however, this did not go accordingly. Teachers, who originally agreed to meet on Fridays after school, reported conflicts during this scheduled meeting and were unavailable to discuss their progress. Additionally, the researcher had a different planning period than the participants. This resulted in limited reflections when considering fidelity of implementation.

Fidelity of Implementation

According to Dusenbury et al (2003), fidelity of implementation was defined as the degree to which participants implemented the program as the developers intended. Furthermore, Dusenbury et al (2003) listed five ways in which fidelity could be measured

including: adherence to the program, participant responsiveness, quality of the program delivery, program differentiation, and dose. When considering this intervention, adherence to the program, dose, and participant responsiveness were the most applicable ways to measure fidelity for PBIS.

Dose

There were two frequency indicators used to demonstrate dose. These included teachers' attendance at the professional development session for using classroom-level PBIS and principals' participation in data team meetings. High fidelity was defined as having 80% of teachers participate in the professional development session and for principals to participate in 80% of data team meetings. The attendance for the professional development session was 100% for the participating teachers which suggested high fidelity. However, there was 0% principal attendance at data team meetings which resulted in low fidelity. On the contrary, 80% of participating teachers attended the data team meeting. The decision to base high fidelity of implementation at 80% was based on prior research that suggested that this percentage indicated an appropriate participation approach for participating high schools when implementing the intervention (Flannery, Sugai, & Anderson, 2009).

Data Fidelity. Due to a lack of principal participation, this negatively affected the researchers' ability to collect data concerning the number of office disciplinary referrals written per teacher. It also prohibited the collection of suspension data that would have allowed for the comparison between students in the treatment group and the comparison group. For these reasons, the research questions concerning office disciplinary referrals and suspensions were not answered. Additionally, some participating teachers in the

treatment group and the comparison group did not submit valid data that could be included in the analysis to answer some research questions. For this reason, the attendance data analyzed only included the teachers who submitted reports at the beginning and the end of the intervention. Furthermore, the academic performance data also only included the teachers who submitted reports at the beginning and the end of the intervention. This allowed for a comparison of those teachers.

Participant Responsiveness

The frequency indicator used to measure responsiveness was students' participation in the end of intervention celebration for good behavior. To attend the celebration, students could not have accrued more than 3 tardies, have an office disciplinary referral, a suspension, or be placed in ISS. High fidelity was defined as having at least 80% of students allowed to participate in the celebration. Of the final 247 science student participants, 214 students were invited to the celebration. This resulted in an 87% student response which suggested high fidelity.

Adherence

The frequency indicator used to measure adherence to the program was teachers' ongoing distribution of reward/acknowledgement tickets. Teachers were expected to distribute acknowledgement tickets to students for behavior, academic performance, attendance, and academic engagement on a weekly basis. High fidelity was defined as having 80% of teachers distribute the acknowledgement tickets weekly while low fidelity was defined as having less than 80% of teachers participate weekly. Of the initial five science teacher participants four of the teachers distributed reward/acknowledgement tickets each week which resulted in an 80% adherence to the program. Due to one science

teacher not implementing the intervention after the second week of the six-weeks intervention, the teacher was removed from the study. For this reason, the data for the two weeks of this teachers' participation were not included. Below you will find data that displays teachers' distribution of acknowledgement tickets for each week as well as an overview of their overall distribution of acknowledgement tickets for the four indicators, academic engagement, academic performance, attendance, and behavior.

Science Teacher No. 1. During week 1 of the intervention, Science Teacher No. 1 distributed tickets to 12 students for displaying academic engagement (*Figure 5.1*). During week 2, the teacher distributed tickets for academic performance and attendance; 3 students were recognized for their academic performance while 2 were acknowledged for their attendance (*Figure 5.2*). During week 3, the teacher distributed 4 tickets for academic performance (*Figure 5.3*), and during week 4 the participant acknowledged 5 students for their academic performance and 13 students for their academic engagement (*Figure 5.4*). During week 5, the teacher distributed tickets to 1 student for academic engagement, 5 students for academic performance, and 8 students for their attendance (*Figure 5.5*). Furthermore, the teacher acknowledged 12 students for academic performance and 1 student for attendance during week 6 of the intervention (*Figure 5.6*). Overall, the teacher acknowledged students 26 times for academic engagement, 29 times for academic performance, 11 times for their attendance, and did not acknowledge any students for their behavior (*Figure 5.7*). Notice that Science Teacher No. 1 mainly acknowledged students for their academic performance while the participant did not acknowledge any students for their behavior throughout the entire intervention. This teacher teaches a total of 13 students in one Science course.

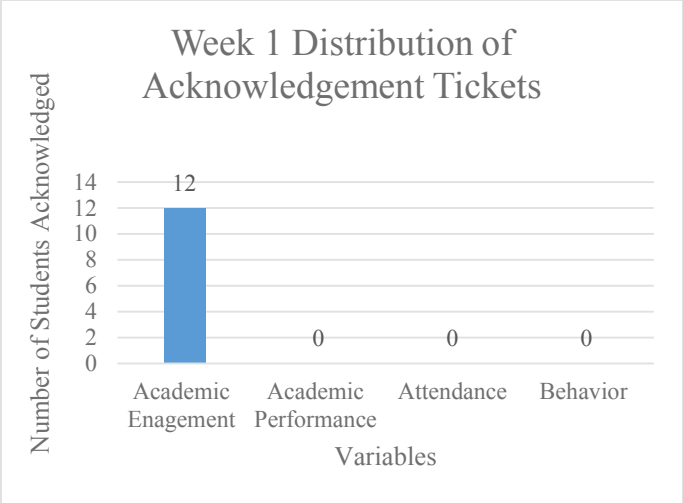


Figure 5.1. Science Teacher No. 1Week 1 Distribution of Acknowledgement Tickets

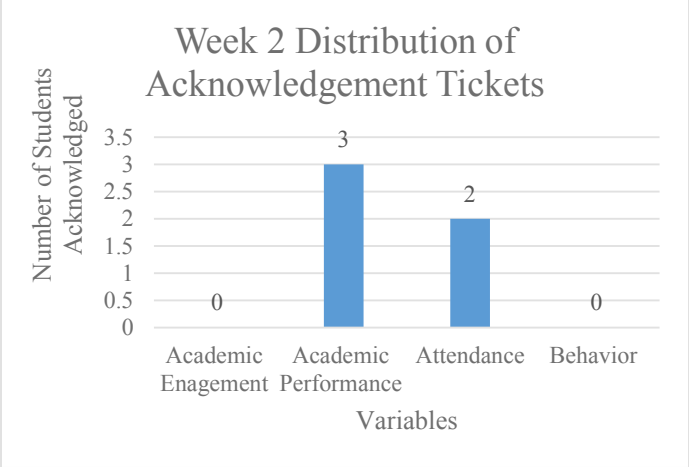


Figure 5.2. Science Teacher No. 1Week 2 Distribution of Acknowledgement Tickets

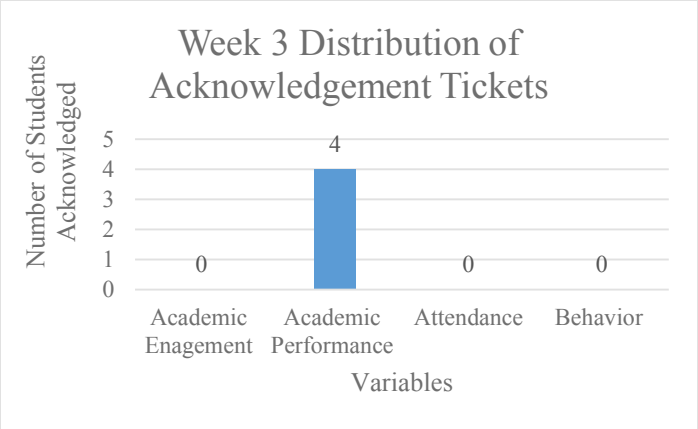


Figure 5.3. Science Teacher No. 1 Week 3 Distribution of Acknowledgement Tickets

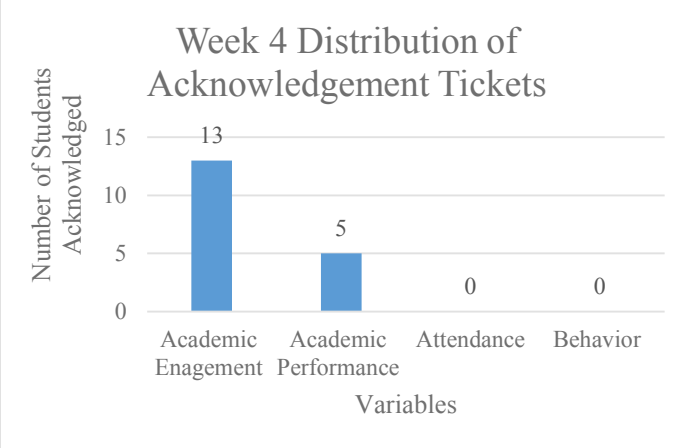


Figure 5.4. Science Teacher No. 1 Week 4 Distribution of Acknowledgement Tickets

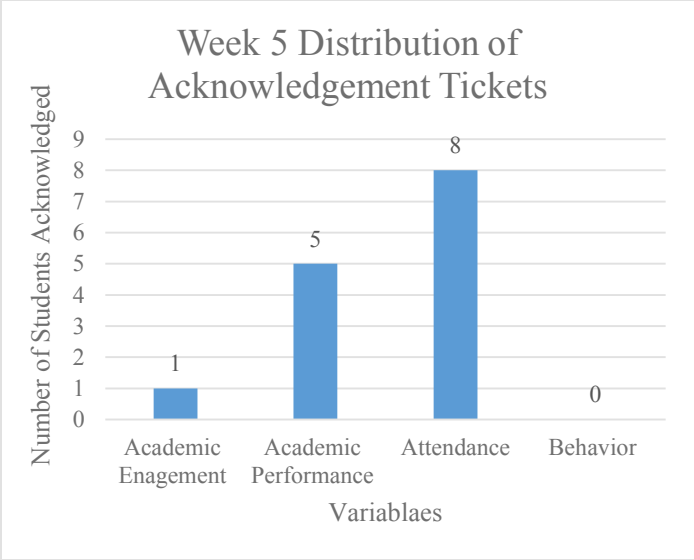


Figure 5.5. Science Teacher No. 1 Week 5 Distribution of Acknowledgement Tickets

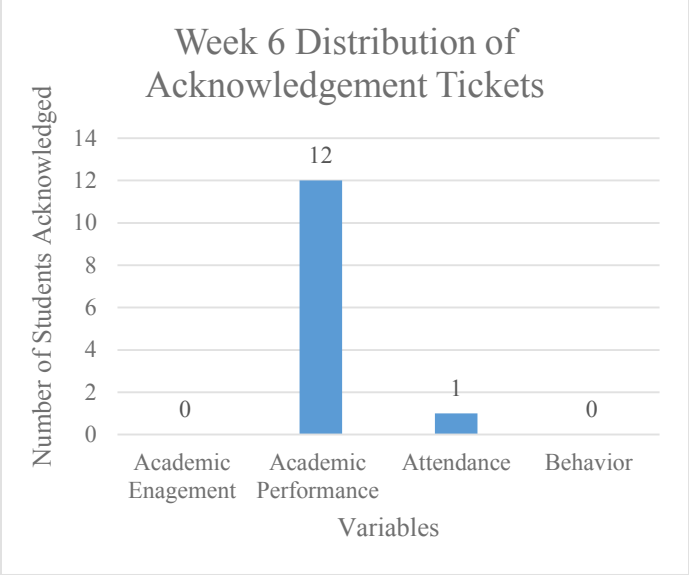


Figure 5.6. Science Teacher No. 1 Week 6 Distribution of Acknowledgement Tickets

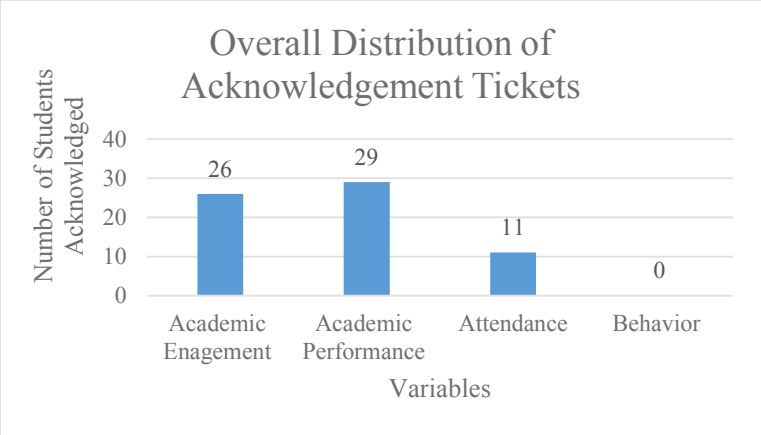


Figure 5.7. Science Teacher No. 1 Overall Distribution of Acknowledgement Tickets

Science Teacher No. 2. During week 1 of the intervention, Science Teacher No. 2 distributed tickets to acknowledge 1 student for academic engagement, 46 students for academic performance, 2 students for attendance, and 1 student for behavior (*Figure 5.8*). During week 2, the participating teacher distributed 20 tickets for academic engagement, 12 tickets for academic performance, 2 tickets for attendance, and 22 tickets for behavior (*Figure 5.9*). Additionally, during week 3 the teacher acknowledged 6 students for academic engagement, 2 students for academic performance, and 10 students for behavior (*Figure 5.10*). To add, the teacher distributed tickets to acknowledge 4 students for academic engagement, 6 students for academic performance, and 5 students for behavior during week 4 (*Figure 5.11*). During week 5, 7 students were acknowledged for their academic engagement and 3 students were acknowledged for their academic performance (*Figure 5.12*). Furthermore, 9 students received tickets for their attendance and 7 students received tickets for their behavior (*Figure 5.12*). Science Teacher No. 2 acknowledged 8 students for their academic engagement during week 6 (*Figure 5.13*). Overall, Science Teacher No. 2 distributed tickets to acknowledge students 46 times for

academic engagement, 69 times for academic performance, 13 times for attendance, and 45 times for their behavior throughout the entire intervention (*Figure 5.14*). Similar to Science Teacher No. 1, Science Teacher No. 2 also acknowledged students more for their academic performance. However, the participant acknowledged students the least for their attendance.

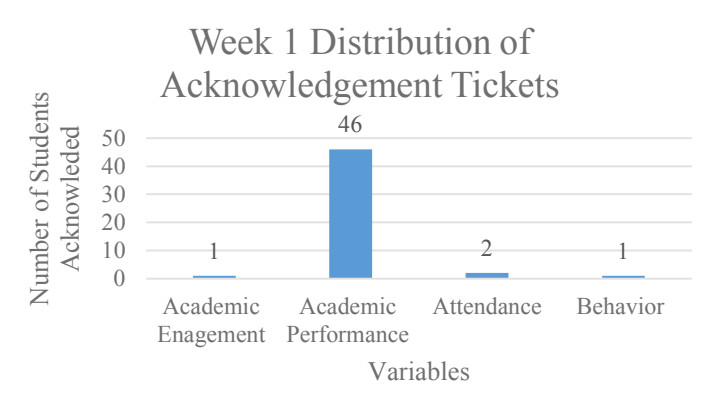


Figure 5.8. Science Teacher No. 2 Week 1 Distribution of Acknowledgement Tickets

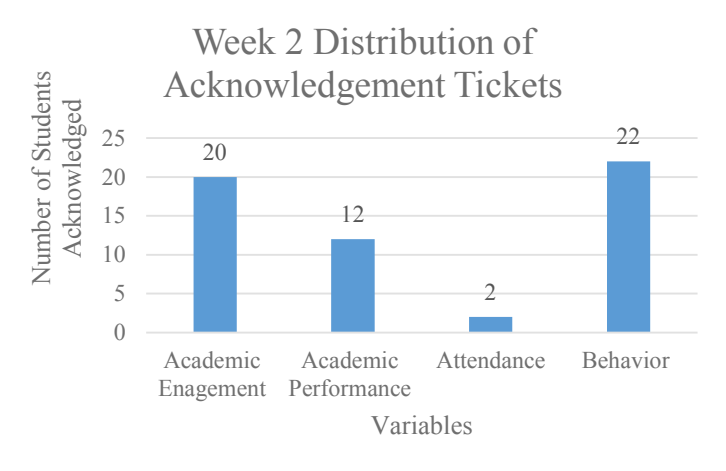


Figure 5.9. Science Teacher No. 2 Week 2 Distribution of Acknowledgement Tickets

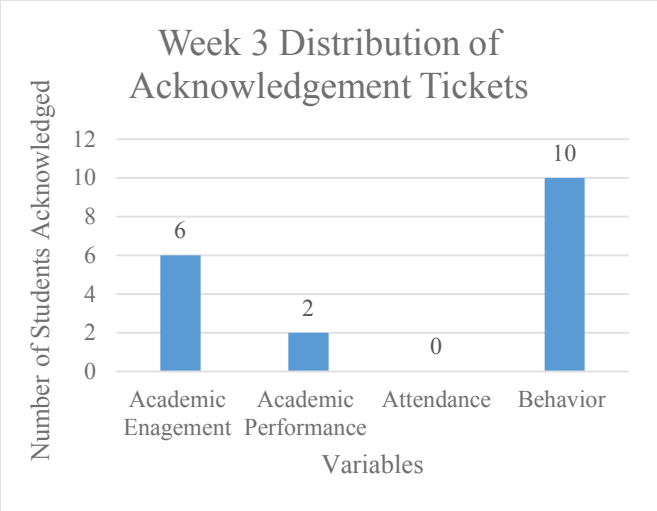


Figure 5.10. Science Teacher No. 2 Week 3 Distribution of Acknowledgement Tickets

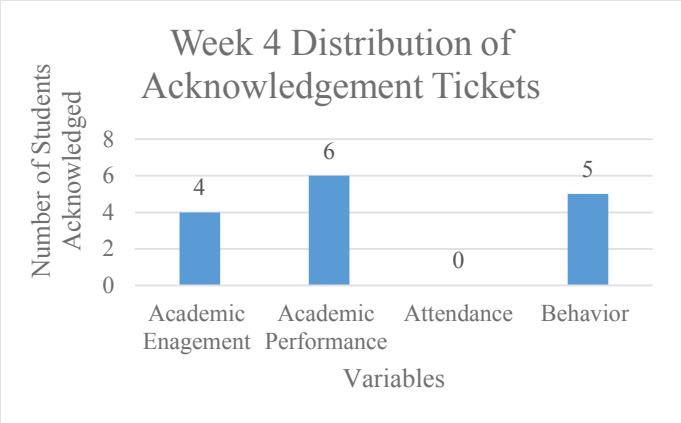


Figure 5.11. Science Teacher No. 2 Week 4 Distribution of Acknowledgement Tickets

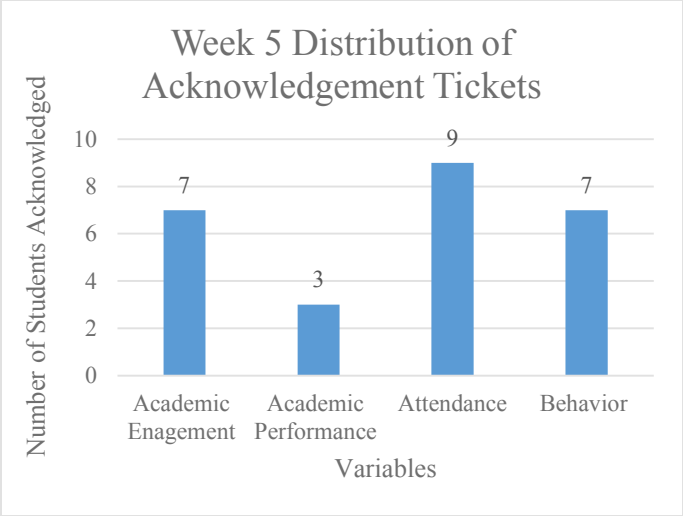


Figure 5.12. Science Teacher No. 2 Week 5 Distribution of Acknowledgement Tickets

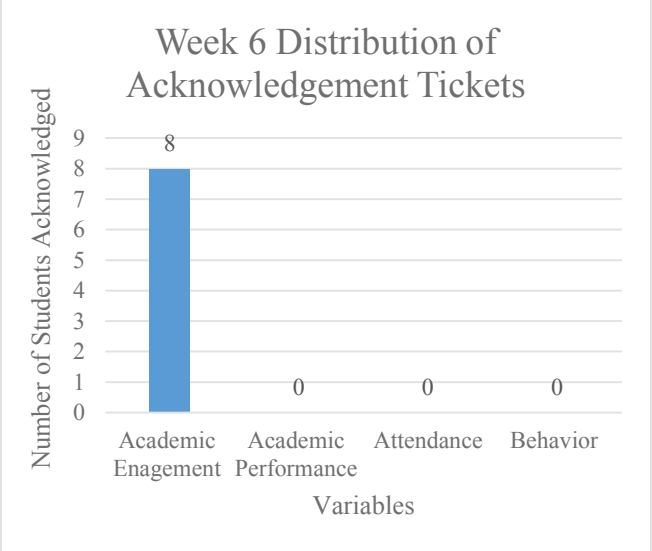


Figure 5.13. Science Teacher No. 2 Week 6 Distribution of Acknowledgement Tickets

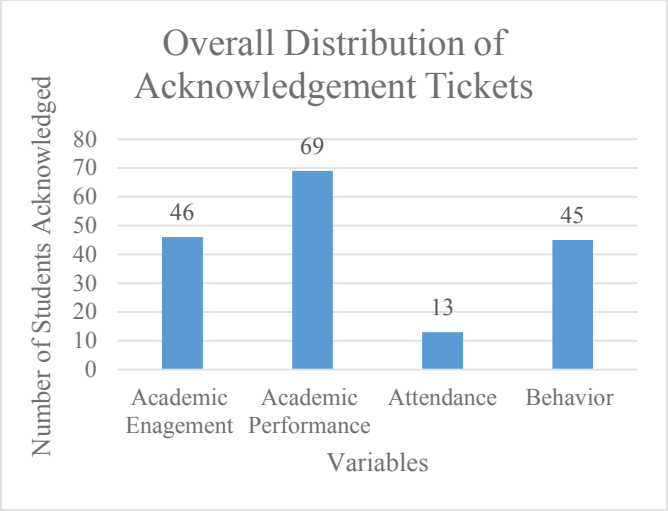


Figure 5.14. Science Teacher No. 2 Overall Distribution of Acknowledgement Tickets

Science Teacher No. 3. During week 1, Science Teacher No. 3 acknowledged 28 students for their academic engagement, 31 students for their academic performance, 45 students for their attendance, and 2 students for their behavior (*Figure 5.15*). During week 2, the participating teacher acknowledged 15 students for academic engagement, 4 students for academic performance, 3 students for attendance, and 22 students for behavior (*Figure 5.16*). Additionally, during week 3, the participant distributed tickets to acknowledge 18 students for their academic engagement, 13 students for academic performance, and 24 students for attendance (*Figure 5.17*). Furthermore, during week 4, 12 students were acknowledged for their academic engagement, 33 for academic performance, 1 for attendance, and 10 for behavior (*Figure 5.18*). During the fifth week, 24 students were acknowledged for their academic engagement while 12 students received an acknowledgement ticket for their academic performance and 16 students were acknowledged for their behavior (*Figure 5.19*). During week 6, the participant acknowledged 51 students for academic engagement, 30 students for academic

performance, 57 students for attendance, and 27 students for behavior (*Figure 5.20*). Overall, the participant acknowledged students for academic engagement 148 times, academic performance 123 times, attendance 130 times, and behavior 77 times (*Figure 5.21*). Notice that Science Teacher No. 3 acknowledged students more for their academic engagement while acknowledging students the least for their behavior similar to Science Teacher No. 1.

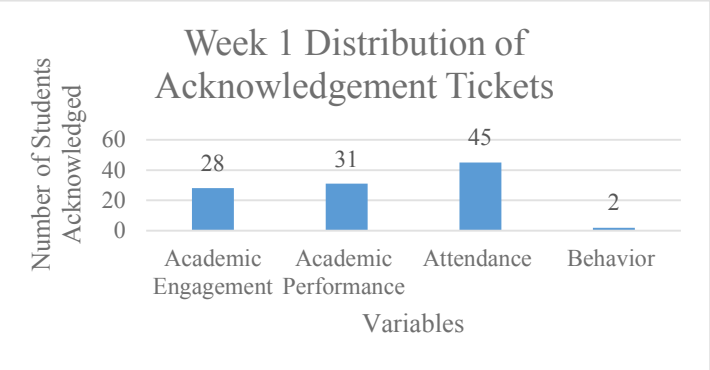


Figure 5.15. Science Teacher No. 3 Week 1 Distribution of Acknowledgement Tickets

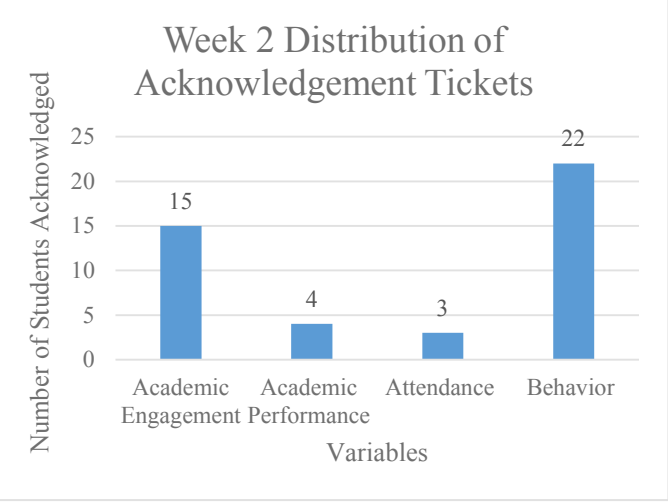


Figure 5.16. Science Teacher No. 3 Week 2 Distribution of Acknowledgement Tickets

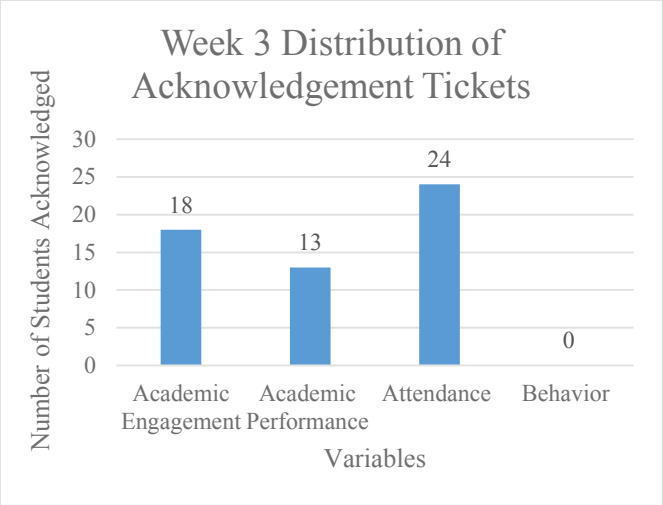


Figure 5.17. Science Teacher No. 3 Week 3 Distribution of Acknowledgement Tickets

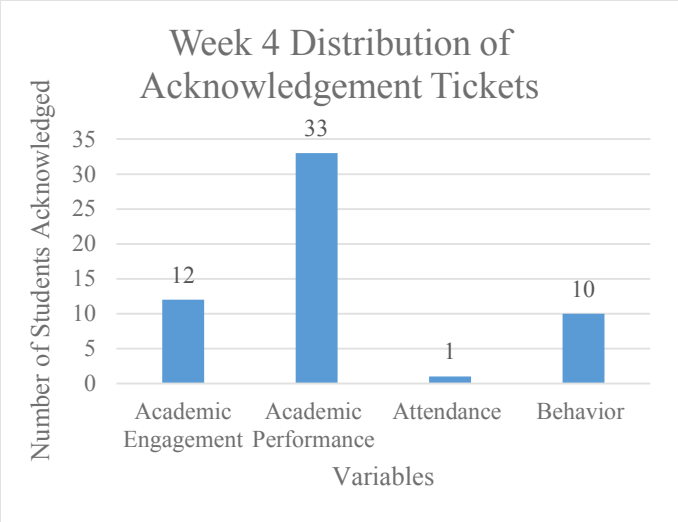


Figure 5.18. Science Teacher No. 3 Week 4 Distribution of Acknowledgement Tickets

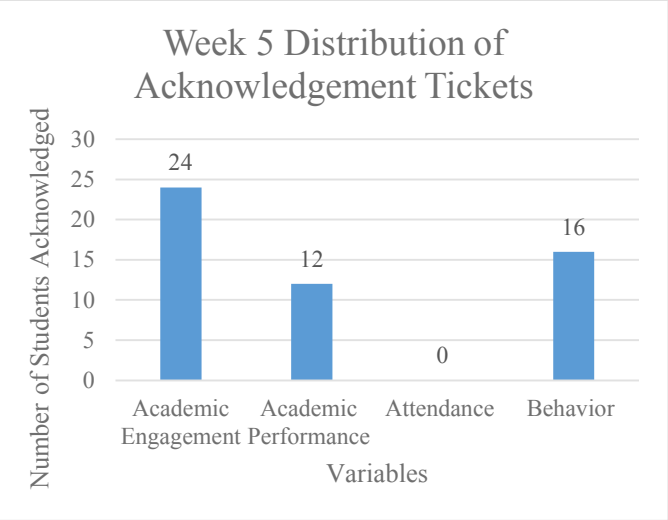


Figure 5.19. Science Teacher No. 3 Week 5 Distribution of Acknowledgement Tickets

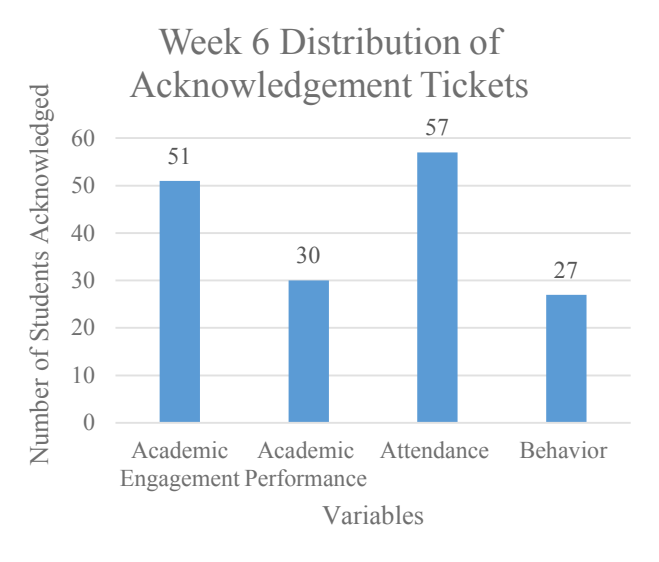


Figure 5.20. Science Teacher No. 3 Week 6 Distribution of Acknowledgement Tickets

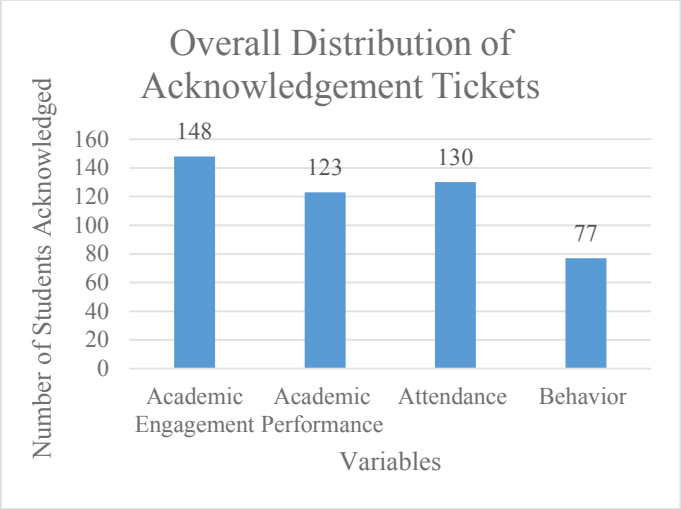


Figure 5.21. Science Teacher No. 3 Overall Distribution of Acknowledgement Tickets

Science Teacher No. 4. During week 1, Science Teacher No. 4 distributed tickets to acknowledge 6 students for academic engagement, 2 students for academic performance, and 6 students for behavior (*Figure 5.22*). Additionally, during week 2, the participant acknowledged 9 students for academic engagement, 4 students for academic performance, 1 student for attendance, and 7 students for behavior (*Figure 5.23*). During week 3, Science Teacher No. 4 distributed 1 acknowledgement ticket for academic engagement and 3 tickets for behavior (*Figure 5.24*). Furthermore, during week 4, the participant acknowledged 1 student for academic engagement, 2 students for behavior, and the participant did not indicate what 1 student was acknowledged for (*Figure 5.25*). During the fifth week, 7 students were acknowledged for academic engagement, 2 for academic performance, and 1 for behavior (*Figure 5.26*). During the sixth week, 1 student was acknowledged for academic engagement and 4 students were acknowledged for their attendance (*Figure 5.27*). Overall, Science Teacher No. 4 acknowledged students 25 times for academic engagement, 8 times for academic performance, 5 times

for attendance, 19 times for behavior, and on 1 occasion the teacher did not indicate what the student was acknowledged for (*Figure 5.28*). Similar to Science Teacher No. 3, Science Teacher No. 4 also acknowledged students more for displaying academic engagement. Science Teacher No. 4 acknowledged students the least for their attendance similar to Science Teacher No. 2.

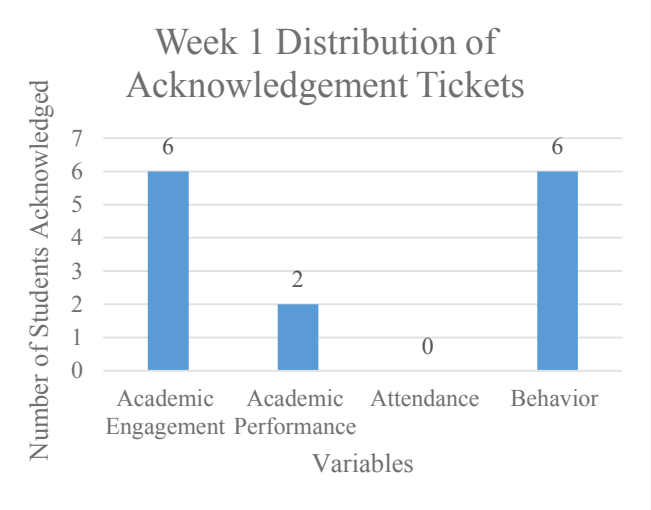


Figure 5.22. Science Teacher No. 4 Week 1 Distribution of Acknowledgement Tickets

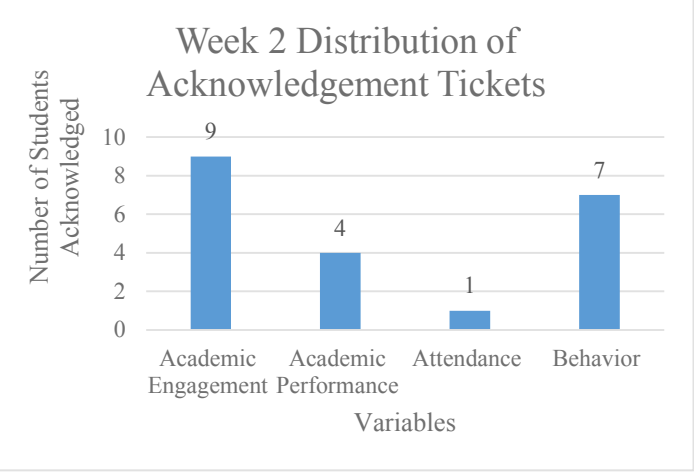


Figure 5.23. Science Teacher No. 4 Week 2 Distribution of Acknowledgement Tickets

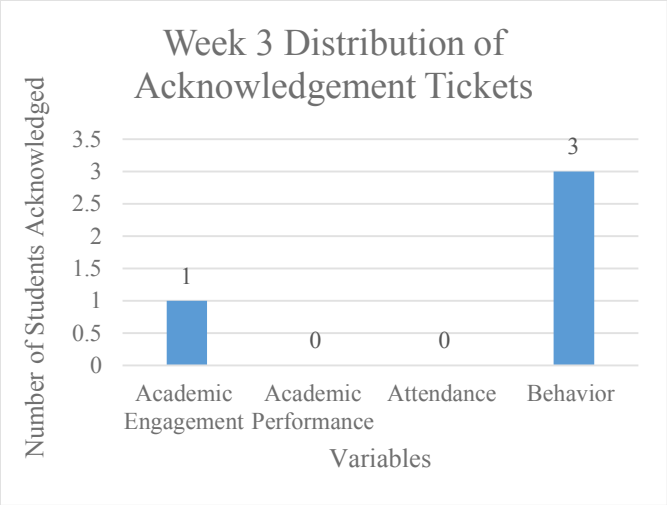


Figure 5.24. Science Teacher No. 4 Week 3 Distribution of Acknowledgement Tickets

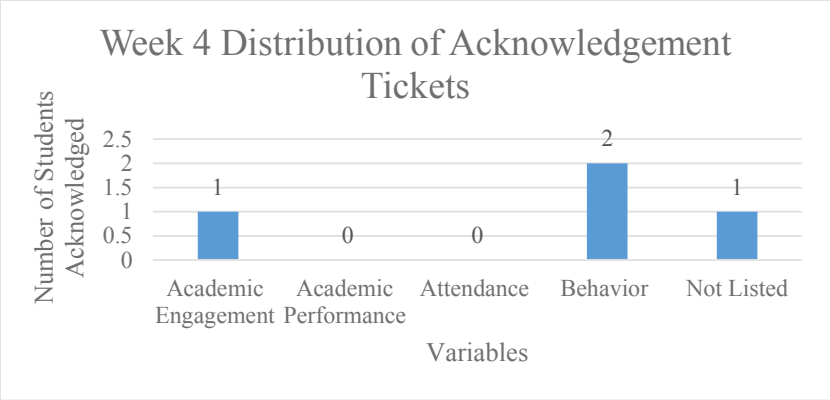


Figure 5.25. Science Teacher No. 4 Week 4 Distribution of Acknowledgement Tickets

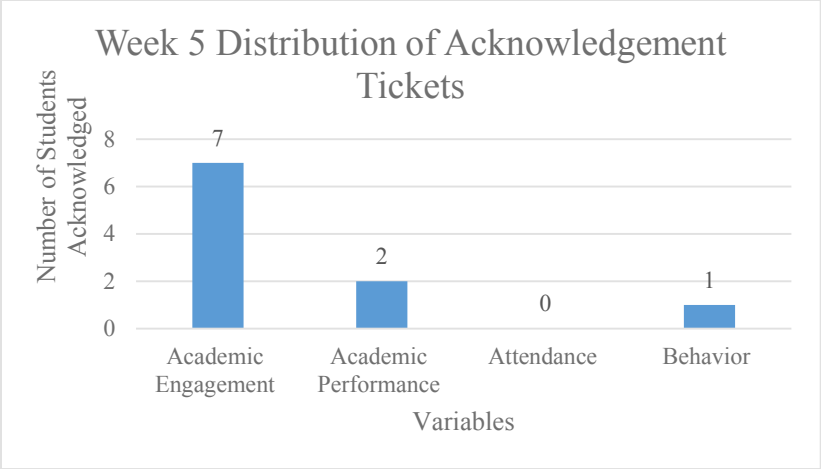


Figure 5.26. Science Teacher No. 4 Week 5 Distribution of Acknowledgement Tickets

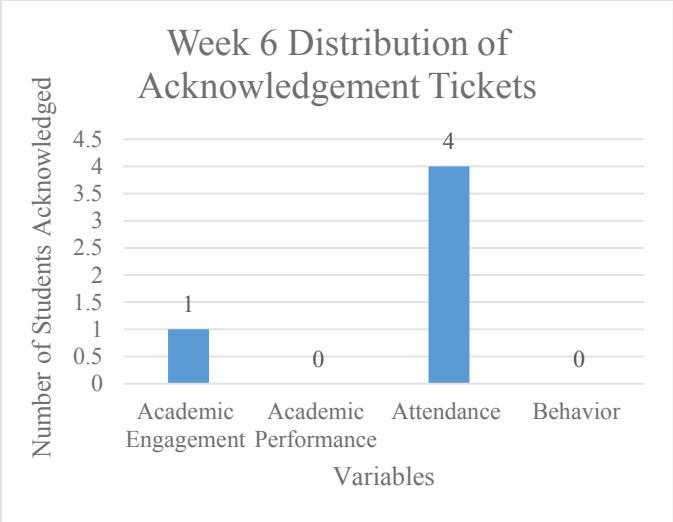


Figure 5.27. Science Teacher No. 4 Week 6 Distribution of Acknowledgement Tickets

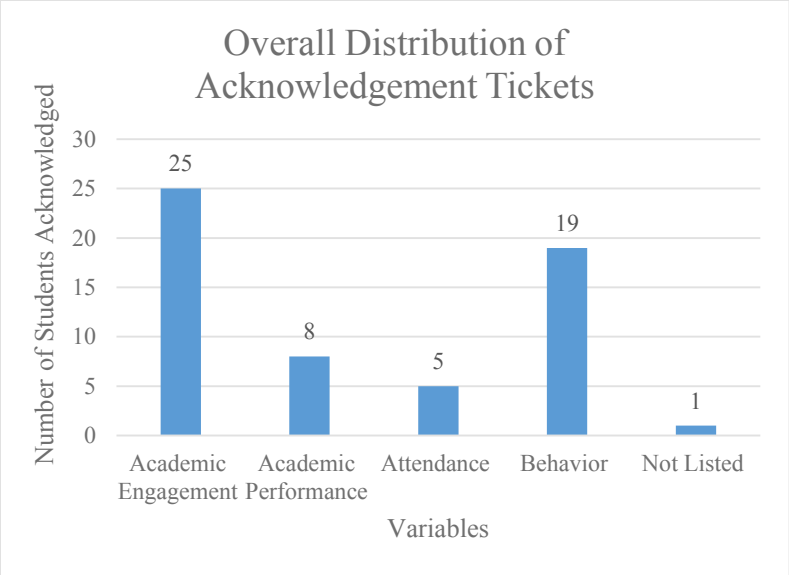


Figure 5.28. Science Teacher No. 4 Overall Distribution of Acknowledgement Tickets

Overall Distribution. As shown in *Figure 5.29* below, Science Teachers No. 1 and 2 both acknowledged more students for academic performance than any other category, while Science Teachers No. 3 and No. 4 acknowledged students the most for their academic engagement. Additionally, Science Teachers No. 1 and 3 acknowledged students the least for demonstrating appropriate behavior, while Science Teachers No. 2 and 4 acknowledged students the least for their attendance. Notice that Science Teacher No. 1 did not acknowledge any students for displaying appropriate behavior. Furthermore, Science Teacher No 4 acknowledged students the least while Science Teacher No 3 acknowledged students the most.

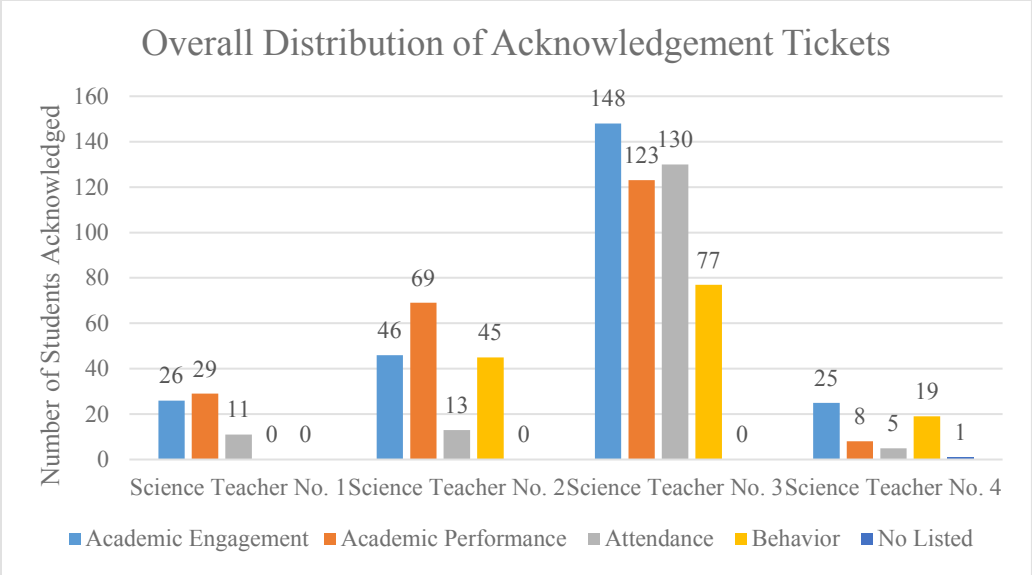


Figure 5.29. Science Teachers Overall Distribution of Acknowledgement Tickets

Outcome Evaluations

There were several outcome evaluations associated with this intervention. Short term outcomes for students included fewer disruptive classroom behaviors and improved attendance, while short-term outcomes for teachers included increasing their use of preventive and reward classroom management strategies while decreasing their use of initial correction and later correction classroom management strategies. Medium-term outcomes for students included improved engagement and fewer suspensions. The medium-term outcome for teachers included writing fewer disciplinary referrals. Additionally, the long-term outcomes for teachers included more time available to teach. To add, long-term outcomes for students was increased academic performance, and it was expected for there to be improvements school-wide for climate along with a reduction in the racial disparities gap between Black and White students concerning discipline. These outcomes were explored with a sequential explanatory design in which quantitative data was assessed prior to the use of qualitative data which allowed for additional

explanations to be provided for better understanding of the data. The findings pertaining to outcomes are organized below by research questions.

Findings Pertaining to Students

Disruptive Classroom Behaviors

Recall that during the classroom-level PBIS professional development sessions, science teachers collaborated to determine the top 5 behavior issues that needed to be addressed during the intervention. These behaviors included: tardiness, cell phone violations, students leaving their seats without permission, students talking without permission including blurting out answers or talking while the teacher was teaching and displaying argumentative behavior. Recall that restorative disciplinary approaches were used to correct inappropriate behavior instead of writing disciplinary referrals. In addition to focusing on the top 5 behavior issues, other disruptive behaviors were explored. The findings pertaining to each are discussed.

Inappropriate vocalization. To determine teachers' experiences with disruptive classroom behaviors, teachers completed a pre-test and post-test that included items for different types of disruptive classroom behaviors. Inappropriate vocalization (Table 5.1) in the classroom was one category of questions. Teachers had to rate how frequently students displayed the following behaviors: (a) Students talk in class without permission. (b) Students talk while I am trying to teach. (c) Students blurt out answers to a question without raising their hands. (d) Students use profanity in class. The teacher rated each of these items as one of the following (1=not at all; 2=very rarely; 3=occasionally; 4=frequently; 5=very frequently). As shown in Table 5.1 students behavior concerning

different types of inappropriate vocalization decreased for every category except profanity which remained almost the same.

Table 5.1

Mean of Inappropriate Vocalization Disruptive Behaviors for Science Teachers

Item	Pre-Test Mean	Post-Test Mean
Talking Without Permission	3.8	2.3
Talking While Teaching	3.0	2.3
Blurting Out Answers	3.2	2.7
Using Profanity	2.6	2.7

During teacher interviews, Science Teacher No. 2 and Science Teacher No. 3 both indicated that they initially had to frequently issue the consequences for blurting out answers or talking without permission during the first few weeks of the intervention. However, after students realized that the teachers were going to be consistent with requiring them to do either squats or push-ups, students stopped displaying this inappropriate classroom behavior. Science Teacher No. 3 indicated that this was a major issue with ninth grade students, but that students began to learn when it was appropriate to talk throughout the intervention. Science Teacher No. 1 indicated that the consequence for inappropriate vocalization did not have to be implemented with students, because they did not display the behavior during the intervention. Notice that profanity was not included as one of the major 5 issues that teachers wanted to address during the intervention; this may explain why teachers' mean response were very similar for the pre-test and the post-test, while other targeted inappropriate vocalization areas improved.

When comparing math teachers' mean responses for disruptive classroom behaviors, there was an increase in inappropriate vocalization in every category except for the use of profanity. Students talking without permission increased from μ=2.9 to μ=3.3 while students talking while the teacher was teaching increased from μ=2.6 to μ=3.0. Additionally, students blurting out answers without raising their hands increased from μ=3.1 to μ=3.7. Students' use of profanity remained the same at μ=2.0.

Table 5.2

Mean of Inappropriate Vocalization Disruptive Behaviors for Math Teachers

Item	Pre-Test Mean	Post-Test Mean
Talking Without Permission	2.9	3.3
Talking While Teaching	2.6	3.0
Blurting Out Answers	3.1	3.7
Using Profanity	2.0	2.0

Argumentative Behavior. Teachers responded to items concerning students' behavior that resulted in arguments that disrupted the classroom learning environment. For example, (a) Students argue with classmate, (b) Students become argumentative with me when I am trying to correct inappropriate behavior, and (c) Students comply with my instructions the first time given. Teachers responded to the items using the following scale (1=not at all; 2=very rarely, 3=occasionally; 4=frequently; 5=very frequently). As shown in Table 5.3, teachers reported that students decreased their frequency use of argumentative behavior. They also increased their compliance with teachers' instruction the first time that they were given.

Table 5.3

Mean of Argumentative Disruptive Behaviors for Science Teachers

Item	Pre-Test Mean	Post-Test Mean
Arguing with Peers	3.0	2.7
Arguing with Teacher	3.0	2.7
Compliance	3.4	4.3

During the classroom-level professional development session at the beginning of the intervention, the science teachers all agreed that they experienced issues with students arguing with their peers and with students insulting their peers unapologetically. There were behavior issues that caused teachers to lose a lot of class time. For this reason, the science teachers agreed that requiring students to write 25 paragraphs concerning argumentative behavior was an appropriate consequence. Science Teachers No. 1, No. 2, and No.3 indicated that after reviewing the big 5 targeted focus areas they did not have to enforce the consequence for argumentative behavior. Students did not want to have to write the required paragraph 25 times due to its length, so the initial issue that the teachers were experiencing ceased after presenting the new classroom rules and consequences at the beginning of the intervention. Specifically, Science Teacher No. 3 mentioned, “If students had a disagreement after the start of the intervention, it never resulted in an argument that disrupted the learning environment resulting in loss of instructional time. I believe that this consequence forced students to learn how to communicate with their peers appropriately.”

On the contrary, when reviewing the data for math teachers in Table 5.4, there were not any major increases or decreases for argumentative behavior. For example, there

was a slight decrease in students arguing with peers (μ=2.1 to μ=2.0). Math teachers reported the same response for students' frequency of arguing with a teacher when the teacher attempted to correct the student for displaying inappropriate behavior (μ=2.0). Additionally, there was a slight increase in students' compliance. Initially μ=3.6 at the beginning of the intervention for compliance; however, at the end of the intervention μ=3.7. These were very small changes which suggested that the classroom-level PBIS professional development that science teachers received could have contributed to the changes in student behavior.

Table 5.4

Mean of Argumentative Disruptive Behaviors for Math Teachers

Item	Pre-Test Mean	Post-Test Mean
Arguing with Peers	2.1	2.0
Arguing with Teacher	2.0	2.0
Compliance	3.6	3.7

Attendance. Teachers responded to two items concerning students' attendance. (a) Students are tardy to class. (b) Students enter class late. Teachers responded to these items using the following scale (1=not at all; 2=very rarely; 3=occasionally; 4=frequently; 5=very frequently). At Excellence High School, tardy was defined as a student entering class after the bell rings, but within the first 5 minutes of class; while students entering class late was defined as a student entering the class after 5 minutes of class. During the initial professional development session, science teachers agreed for tardiness to be included in the major 5 areas to be addressed throughout the intervention. As shown in Table 5.5, science teachers reported a decrease frequency for students

entering class tardy and entering class late. The topic of attendance was also further discussed in another area of this chapter. It was included as a form of disruptive behavior, because students tended to disrupt the start of a lesson when they entered class tardy or late. The teacher typically had to re-explain instructions for beginning class activities.

Table 5.5

Mean of Attendance for Science Teachers

Item	Pre-Test Mean	Post-Test Mean
Tardy	3.8	2.7
Late	3.6	2.7

When comparing math teachers' responses to science teachers, one noticed that the math teachers reported consistent findings for students' tardiness and late arrival to class. The mean response was 2.7 for both categories for the pre-test and the post-test (see Table 5.6).

Table 5.6

Mean of Attendance for Math Teachers

Item	Pre-Test Mean	Post-Test Mean
Tardy	2.7	2.7
Late	2.7	2.7

Though the math teachers reported the same frequency behavior for students' tardiness and lateness, additional attendance data revealed that there were some improvements in their attendance data; however, the discrepancies may have been due to

the inconsistencies in students' tardies. For example, some of their classes experienced improvements while other class periods' attendance remained the same.

Additional Disruptions. In addition to inappropriate vocalizations, argumentative behavior, and attendance being areas of disruptions, there were additional disruptions that were not included in these categories. Teachers responded to items on a questionnaire that asked about these specific areas of concern. (a.) Students leave their assigned seats without permission. (b) Students have their head down during class. (c.) I send students to the office for dress code violations. (d.) Students come to class unprepared. Teachers rated the frequency of these behaviors using the scale (1=not at all; 2=very rarely; 3=occasionally; 4=frequently; 5=very frequently). Recall that students leaving their assigned seats without permission was a major concern that all science teachers wanted to address as a top 5 targeted behavior. When students had their head down in class or came to class unprepared these behaviors contributed to a lack of academic engagement. Additionally, at Excellence High School teachers were required to observe students' attire for dress code violations during first period every day and throughout the day. This sometimes disrupted the learning environment and caused the teacher to lose class time. Notice in Table 5.7 that science teachers reported a decrease in all of these behaviors at the end of the intervention. During interviews, Teacher No. 2 and Teacher No. 3 reported that they had to enforce the consequences for students leaving their seats without permission during the first few weeks of the intervention; however, as the intervention progressed they reduced the number of times that they had to enforce the consequences. Teacher No. 1 reported that the consequence for this behavior did not have

to be enforced due to students not demonstrating this behavior after the start of the intervention.

Table 5.7

Mean of Additional Disruptions Reported by Science Teachers

Item	Pre-Test Mean	Post-Test Mean
Leave Seat	2.8	2.3
Head Down	2.8	2.0
Dress Code Violations	3.0	2.3
Unprepared for Class	3.4	2.7

Notice in Table 5.8 that there were inconsistencies regarding the findings for math teachers. There was an increase in the mean frequency reported for students leaving their assigned seats and an increase in the frequency reported for students having their heads down during instructional time. However, there was a decrease in the frequency of teachers sending students to the office for dress code violations and a decrease in students coming to class unprepared.

Table 5.8

Mean of Additional Disruptions Reported by Math Teachers

Item	Pre-Test Mean	Post-Test Mean
Leave Seat	2.7	3.3
Head Down	2.3	2.7
Dress Code Violations	2.4	2.0
Unprepared for Class	3.0	2.7

Educational Engagement

In addition to exploring incidences of students' disruptive classroom behaviors, this intervention was designed to encourage students' engagement in their learning. A measure of educational engagement was given to students before and after the intervention to determine if there was significant improvement (See Appendix L for the correlations of items for this scale). To test for significant differences, an independent samples t-test was run for each of the three groups. Recall that the treatment group included science students. Table 5.9 below displays the results of each of these tests. A statistically significant difference was found between science students' level of educational engagement at the beginning of the intervention in comparison to the end of the intervention ($t=1.97$, $p<0.05$). These improvements were not evident for students who were enrolled in a math only course or for students who were enrolled in both a math and a science course.

Table 5.9

Independent Samples Tests for Educational Engagement for Student Participants

Student Groups	F	Sig	t	df	Sig. (2-tailed)
Science Only	0.13	0.72	1.97	113	0.05
Math Only	0.83	0.36	0.35	209	0.72
Math and Science	0.01	0.92	1.45	190	0.14

This data supported the science teachers' report that that they noticed an increase in student engagement throughout the intervention. For example, Science Teacher No. 2 reported that students were "more readily available to participate in class and serve as peer helpers." Additionally, Science Teacher No. 3 reported, "Students began to readily

volunteer to participate in class demonstrations and class activities. They started to realize that their participation and active engagement helped them understand scientific concepts better."

Despite positive results shown from the independent samples t-tests, results from a simple regression suggested that exposure to using classroom-level PBIS was not a significant predictor of improved educational engagement. The regression model examined the effect of two separate predictors of educational engagement, exposure to classroom-level PBIS and being a senior. While the exposure to PBIS was evident, seniors compared to underclassmen were exposed to two different school administrations and had seen the changes in educational engagement over the past three years at the school. It was important to see if this class might have seen a change with the implementation of the classroom-level PBIS intervention. The regression model was able to explain 0.2% of the variation in educational engagement (Adj R^2=-0.002), and the model was not significant (F=.47, p=0.63). Therefore, exposure to the classroom-level PBIS intervention was not a significant predictor of educational engagement (β=0.03, p=0.47). This suggested that every time there was an increase in exposure to classroom-level PBIS, there was only a 0.23 unit increase in students' educational engagement (Beta=0.23). The p value of .47 indicated that this was not statistically significant.

Academic Performance

During the professional development session for using classroom management in science classes, teachers were trained to acknowledge students for their academic performance on assessments if they scored a 70% or higher. A 70% was listed as the criteria for the distribution of tickets, because the Graduation Tracking System used a

70% average as an indicator for determining if a student was at-risk for dropping out of high school. To determine if the implementation of classroom-level positive behavior intervention supports had a positive impact on students' academic performance, teachers in the treatment and the comparison group completed pre and post intervention academic performance sheets. Three of the four participating science teachers submitted academic performance data that could be used. Of these three teachers, Science Teacher No. 1 experienced a decrease in class averages for an Advance Chemistry course (See *Figure 5.30*). Science Teacher No. 2 also experienced a decrease in class averages for one General Biology and three Anatomy and Physiology courses (See *Figure 5.31*). However, Science Teacher No. 3 experienced increases in three out of four class averages (See *Figure 5.32*). The classes that experienced an increase included two General Biology classes and an Advance Placement Biology class. However, the class that experienced a decrease in class average was an Advance Biology course.

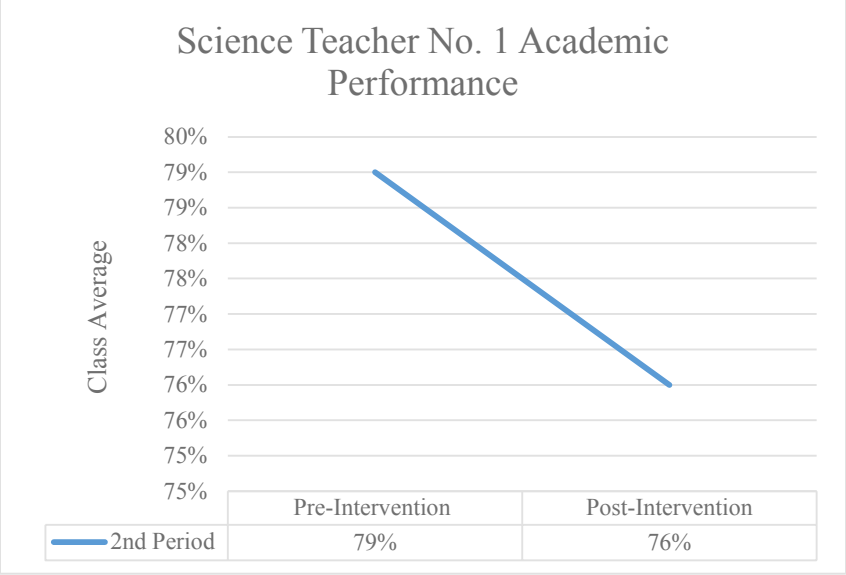


Figure 5.30. Science Teacher No. 1 Academic Performance

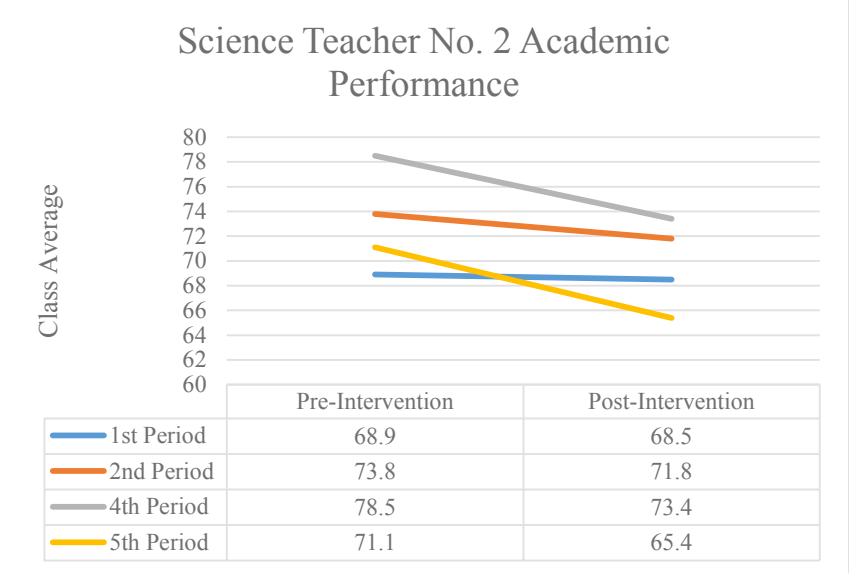


Figure 5.31. Science Teacher No. 2 Academic Performance

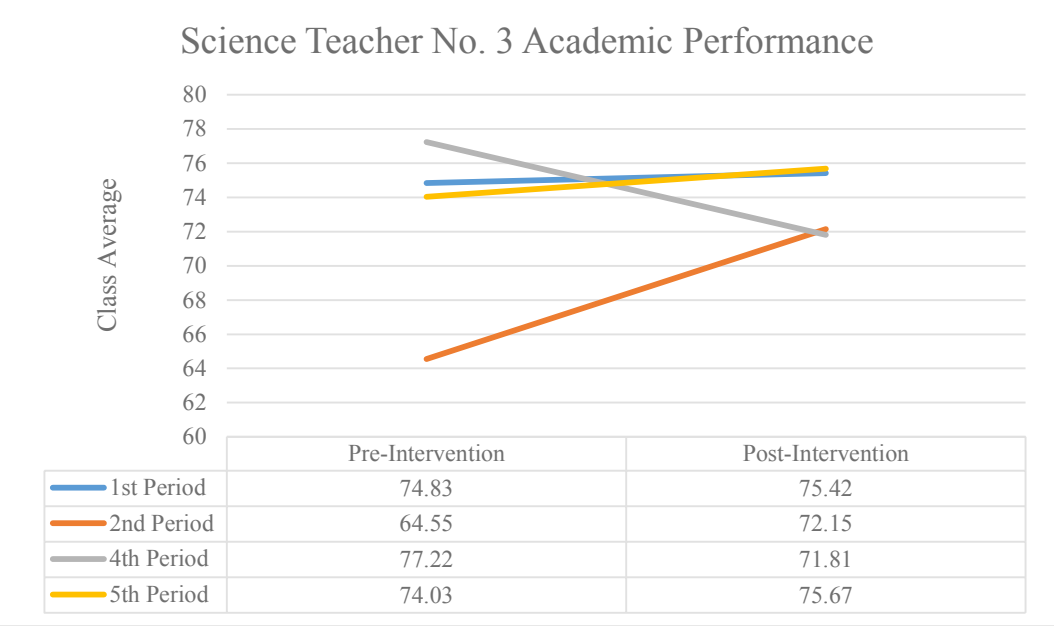


Figure 5.32. Science Teacher No. 3 Academic Performance

Despite experiencing decreases in academic performance for every class, Science Teacher No. 1 and Science Teacher No. 2 acknowledged students more for their academic performance in comparison to acknowledging students for their attendance, behavior, and

academic engagement. Based upon their interview responses, teachers acknowledged students differently for their academic performance. For example, Science Teacher No. 1 stated that she acknowledged students whenever "students made an A on a test or submitted a lab report on time," while Science Teacher No. 2 acknowledged students whenever they "had the highest scores on assessments, above average on tests, quizzes, and projects." On the contrary, Science Teacher No. 3 acknowledged students whenever they made "a C or higher on tests, quizzes, and lab reports." These differences in acknowledgement explained why Science Teacher No. 3 had increases in class averages while the other teachers did not experience increases. Furthermore, as shown in *Figure 5.29*, Science Teacher No. 3 acknowledged more students for their academic performance in comparison to the other teachers.

When reviewing math teachers' academic performance data, three of the math teachers experienced increases in their classes averages. For example, Math Teacher No. 4 experienced an increase in three classes. Math Teacher No. 5 and Math Teacher No. 6 experienced an increased in one of their class averages. This increase in academic performance could have been due to diffusion. For example, some students had a participating science teacher and a participating math teacher. Math Teacher No. 4's first period math class had a 67% overlap with Science Teacher No. 3's students. Additionally, Math Teacher No. 4's third period class had a 24% overlap with participating science teachers. Math Teacher No. 4's fourth period class also had a 26% overlap between with the participating science teachers. Furthermore, Math Teacher No. 5's second period class that experienced an increase in academic performance had a 14% overlap in students, while Math Teacher No. 6's second period math course had 63% of the same students as

Science Teacher No. 3. Because these students were being acknowledged for their academic performance in their science classes, they could have been more motivated to achieve in their other courses.

Suspensions

Due to a lack of participation in data team meetings by the principals, research questions concerning the number of suspensions that students received who were in the treatment and the comparison groups were not answerable. As a teacher, the student investigator did not have access to the disciplinary actions taken by administrators when students received an office disciplinary referral.

Tardiness/Attendance

Science Teachers. When comparing the science teachers' pre-attendance data (See *Figure 5.33*) and post-attendance data (See *Figure 5.34*), there was an increase from 83 students to 117 students who did not have any tardies to their science class. This meant that an additional 34 students did not receive any tardies during the intervention. Furthermore, the number of students who had between 1 to 3 tardies decreased from 80 to 71 and the number of students with 4 to 6 tardies decreased by 14 from 31 students to 17 students. This pattern continued for every category of tardies afterwards except for the number of students who received between 16 to 18 tardies. This category only included one student at the beginning and the end of the intervention. Overall, there was a decrease in number of tardies in every category except one which remained the same. Teachers' distribution of acknowledgement tickets may have contributed to this decrease in tardiness, because each of the three science teachers who submitted post-attendance data experienced improved on-time attendance in every class period.

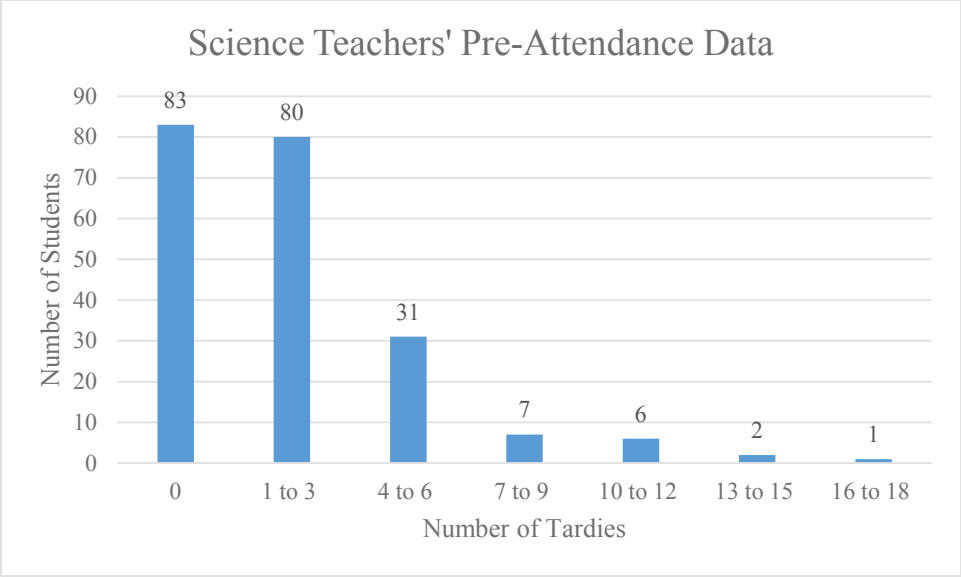


Figure 5.33. Science Teachers' Pre-Attendance Data

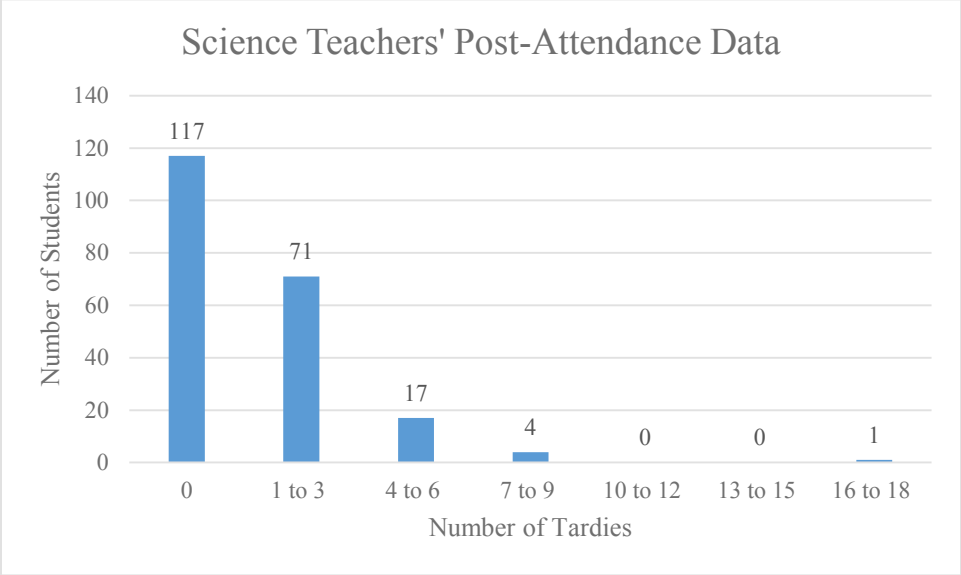


Figure 5.34. Science Teachers' Post Attendance Data

Math Teachers. When comparing the math teachers' pre-attendance data (See *Figure 5.35)* and post-attendance data (See *Figure 5.36*) they experienced increases and decrease in on-time attendance. For example, the number of students without any tardies was 177 at the beginning of the intervention and this increased to 184 students at the end

of the intervention. This revealed that an additional 7 students did not receive any tardies. Though this was an increase, this was not as great of an increase as the science teachers experienced. Additionally, the number of students who received 1 to 3 tardies decreased by 16 students from 100 to 84 students. However, the number of students who received 7 to 9 tardies was 1 at the beginning of the intervention, but it increased to 14 students. Furthermore, the number of students with 10 to 12 tardies increased from 1 student to 4 students at the end. Based upon the data, there were inconsistencies with students' tardiness in math classes. The areas of improvement may have been due to the overlap of students who took a participating science teachers' class where attendance was being acknowledged.

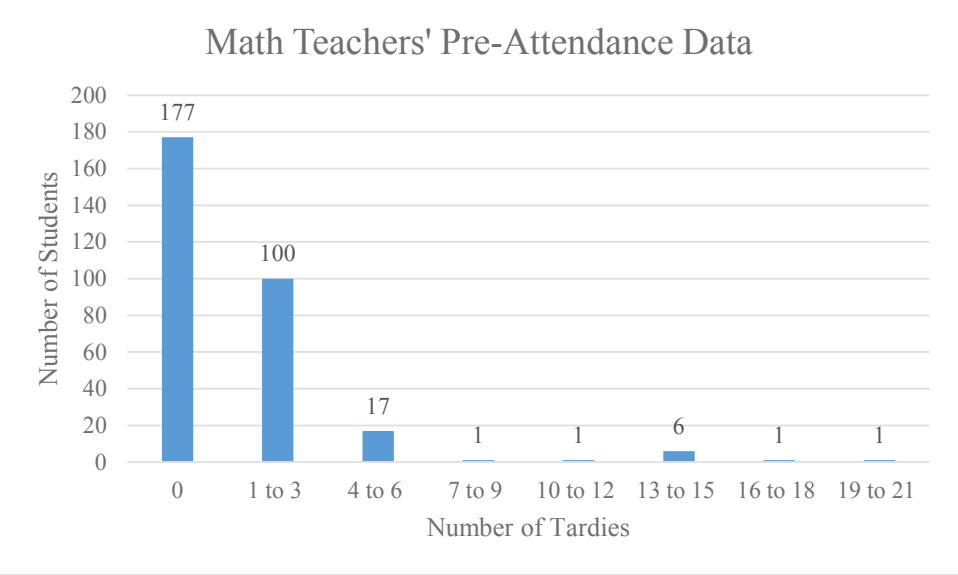


Figure 5.35. Math Teachers' Pre-Attendance Data

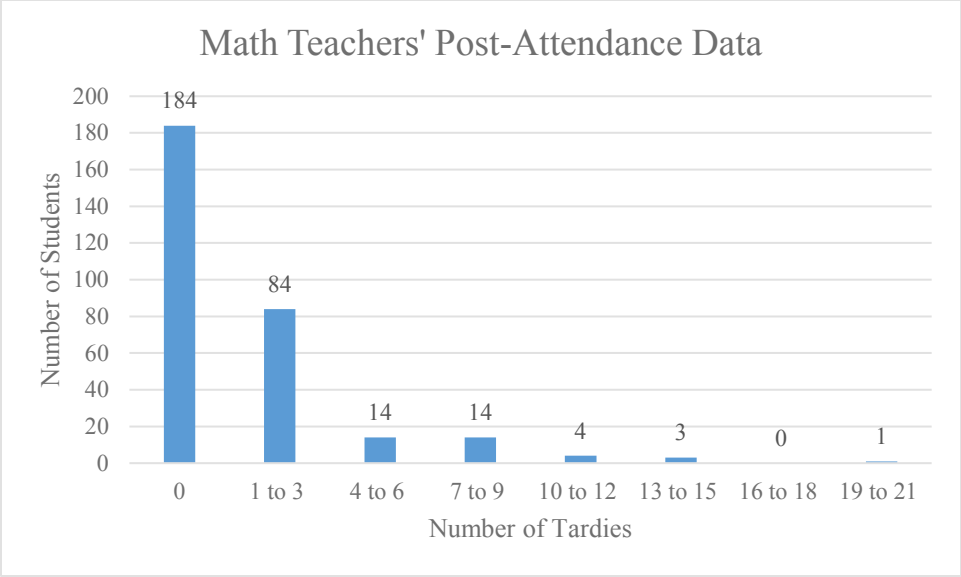


Figure 5.36. Math Teachers' Post Attendance Data

School Climate

To determine if using classroom-level PBIS had an effect on school climate, a separate independent samples t-test was run for the Science Only group, the Math Only group, and the Math and Science Group to compare scores on a school climate measure. Students responded to a school climate scale (See Appendix L to review correlations for the scale). The results of each independent samples t-test were compiled in Table 5.10 shown below. The results suggested that there was no statistically significant difference in school climate at the end of the intervention. This suggested that students who were exposed to PBIS intervention showed no improvements in school climate through PBIS implementation. While this finding was not significant, research studies have shown that school climate improved as a result of implementing PBIS over a longer period of time. The initial finding of non-significance was expected given the six-weeks intervention period.

Table 5.10

Independent Samples Tests for School Climate for Student Participants

Student Groups	F	Sig	T	df	Sig.(2-tailed)
Science Only	0.00	0.97	-0.60	116	0.55
Math Only	6.07	0.02	-1.50	206	0.13
Math and Science	2.14	1.45	-0.17	194	0.86

Though there were not any significant changes in school climate based upon t-test results, a simple regression revealed being exposed to PBIS at the classroom-level was a significant predictor of improved school climate. The regression model examined the effect of two separate predictors on school climate, exposure to PBIS and being a senior. While the exposure to PBIS was clear, seniors compared to underclassmen had been exposed to two different school leaders and had seen the change in climate over the past three years at the school. It was important to see if this class might have seen a change with the implementation of the PBIS intervention. The regression model explained 1.0% of the variation in school climate (Adj $R^2 = 0.01$), and the model was not significant ($F=3.84$, $p=0.02$). The model was found to be statistically significant, and it was interesting to note that exposure to PBIS was the strongest, significant predictor of improved school climate ($\beta=0.09$, $p=0.05$). This suggested that there was a 0.85 unit increase in school climate as a result of being exposed to PBIS (Beta=0.85). The p value of 0.05 indicated that this was statistically significant. Therefore, if participants continue to implement the intervention, over time there may be increases in school climate.

Findings Pertaining to Teachers

Disciplinary Referrals

Due to a lack of participation in data team meetings by the principals, research questions concerning the number of office disciplinary referrals written by math and science teachers were not answered. Despite this lack of data, science teachers reported a decrease in number of disciplinary referrals written while completing interview questions. Furthermore, both math and science teachers reported a decrease frequency use of referring students to the office while completing the post-questionnaire.

Level of Preparedness

When considering teachers' overall level of preparedness for managing misbehavior, there were differences between the math and science teachers. Surprisingly, there was a decrease in reported level of preparedness for science teachers while there was an increase in level of preparedness for managing misbehavior reported by math teachers. Table 5.11 shows a mean of μ=4.6 for the pre-test for science teachers and μ=3.3 for the post-test, while there was a mean of μ=3.9 for the pre-test for math teachers and μ=4.7 for the post-test for math teachers.

Table 5.11

Mean Level of Preparedness for Math and Science Teachers

	Math Teachers		Science Teachers	
Item	Pre-Test	Post-Test	Pre-Test	Post-Test
Level of Preparedness	3.9	4.7	4.6	3.3

After exploring this deeper, the researcher realized that the teacher who strongly disagreed with feeling prepared to manage the assigned classes did not enforce the consequences agreed upon for addressing the top 5 targeted behavior issues. The participating science teacher reported that there was a level of discomfort with asking students to write paragraphs or do physical exercise for misbehavior because it was assumed that students would automatically refuse to comply with the consequence. Though this teacher agreed to the consequences during the professional development session, one later realized that there was a level of confidence lacking when it was time to enforce the consequence. Additionally, this teacher distributed the least amount of acknowledgement tickets in comparison to other science teachers. This suggested that the teacher was not enforcing consequences for those who did not display appropriate behaviors and the teacher was not acknowledging the students consistently for appropriate behavior. For this reason, future studies may need to explore teachers' personality types or level of confidence as it relates to level of preparedness for managing misbehavior in the classroom.

Preventive Strategies

Teachers were asked to respond to items that assessed their frequency use of preventive classroom management strategies. (a) I teach students appropriate behavior. (b) I establish routine classroom procedures. (c) I negotiate classroom rules with students. Teachers rated these items on the following scale (1=not at all; 2=very rarely; 3=occasionally; 4=frequently; 5=very frequently). As shown in Table 5.12, math and science teachers increased how often they negotiated classroom rules with students. Math teachers' initial $\mu=1.7$ for negotiating rules, but at the end of the intervention, $\mu=2.3$.

Similarly, science teachers' initial μ=1.0, but the final mean was 2.7. However, there was not much variation for how often either group of teachers taught appropriate behaviors or established routine classroom procedures.

Table 5.12

Mean Preventive Classroom Management Strategies for Math and Science Teachers

	Math Teachers		Science Teachers	
Item	Pre-Test	Post-Test	Pre-Test	Post-Test
Teach Appropriate Behavior	4.3	4	4.4	4.3
Establish Routine Procedures	4	4	4.4	4.3
Negotiate Rules	1.7	2.3	1.0	2.7

Initial Correction Strategies

These strategies included having student conferences, using nonverbal body language, redirecting student behavior, and using proximity to address student misbehavior or disruptive classroom behaviors prior to implementing later correction strategies such as writing a disciplinary referral. Teachers rated their frequency use of each of these strategies by responding to the following items (a) I talk things over with students after class when there is a behavior issue. (b) I use nonverbal body language to address inappropriate behaviors. (c) I redirect students. (d) I move closer to students when they are demonstrating inappropriate behaviors. Teachers used the following scale: (1=not at all; 2=very rarely; 3=occasionally; 4=frequently; 5=very frequently). Based upon the mean data displayed in Table 5.13, there were not any major differences

between the math and science teachers' use of initial correction strategies at the beginning and end of the intervention. Science teachers had a slight increase in their frequency use of student conferences and use of nonverbal body language, while they had a slight decrease in their frequency use of redirecting students and using proximity. Math teachers decreased their use in every category.

Table 5.13

Mean Initial Correction Classroom Management Strategies for Math and Science Teachers

	Math Teachers		Science Teachers	
Item	Pre-Test	Post-Test	Pre-Test	Post-Test
Student Conference	4.1	3.3	3.6	4
Nonverbal Body Language	4.1	4.0	4.2	4.3
Redirect Students	4.1	3.7	4.6	4.3
Proximity	4.3	4.0	4.4	4.3

Reward Strategies

Teachers were asked to respond to items that assessed their frequency use of reward classroom management strategies. These items included: (a) I distribute token rewards to students. (b) I implement a merit system within my class. (c) I distribute educational rewards. Teachers rated their frequency use using the following scale (1=not at all; 2=very rarely; 3=occasionally; 4=frequently; 5=very frequently). Based upon the mean data displayed in Table 5.14, science teachers increased their use of reward

strategies throughout the intervention while math teachers decreased their use of reward strategies throughout the intervention.

Table 5.14

Mean Reward Classroom Management Strategies for Math and Science Teachers

	Math Teachers		Science Teachers	
Item	Pre-Test	Post-Test	Pre-Test	Post-Test
Distribute Tokens	2.1	1.3	1.8	4.0
Merit System	2.4	1.7	1.4	4.0
Educational Rewards	3.4	2.7	2.0	4.3

Later Correction Strategies

Teachers' use of later correction strategies were assessed on a pre-test and a post-test to determine if there were differences between math teachers and science teachers' implementation throughout the intervention. The following items were included in this category of strategies: (a) I contact parents regarding students' disruptive classroom behaviors. (b) I have students to sign behavior contracts. (c) I put students in isolation. (d) I refer students to the principal. Teachers rated these items using the following scale (1=not at all; 2=very rarely; 3=occasionally; 4=frequently; 5=very frequently). Science teachers decreased their frequency of parent contact, isolation, and referrals while increasing their use of behavior contracts. However, math teachers decreased their use of every later correction item.

Table 5.15

Mean Later Correction Classroom Management Strategies for Math and Science Teachers

	Math Teachers		Science Teachers	
Item	Pre-Test	Post-Test	Pre-Test	Post-Test
Parent Contact	3.3	2.7	3.4	3.3
Behavior Contract	1.9	1.7	1.4	2.7
Isolation	1.9	1.7	3.2	3.0
Office Referral	2.3	2	2.4	2.3

Findings for Teachers and Students' Experiences with PBIS

Teacher Experiences

Science Teacher No. 1. When asked about experiences with PBIS, this teacher indicated that there was a decrease in each of the 5 targeted behavior areas. These areas included tardiness, cell phone violations, students being out of their seats without permission, students blurting out answers or talking without permission, and students arguing with their peers. The teacher believed that students improved in each of these areas because they "wanted to get the prize." After the start of the intervention, there were not any issues with students being out of their seats, talking without permission or arguing with peers. Though students accrued tardies after the start of the intervention, none of the students accrued 3 tardies to result in the consequence for the 25 tardy paragraphs. Regarding cell phone violations, this teacher only confiscated and submitted one cell phone during the intervention.

When asked about experiences with ticket distribution, Science Teacher No. 1 explained that she distributed tickets for academic performance whenever students made an A on a test or submitted a lab report on time. Based upon her overall distribution of tickets, Science Teacher No. 1 distributed more tickets for academic performance than any other indicator (see *Figure 5.7*). The participant distributed a total of 29 tickets throughout the intervention to acknowledge students for their academic performance. This teacher thought that the academic performance for this class increased, because the students were so "goal driven." However, the class average for this class of 13 students decreased from a 79% to a 76% during the intervention. This decrease may have been due to the teacher only acknowledging students who made an A instead of acknowledging students for making a 70% or higher. This teacher also reported that there was an increase in students' academic engagement, and that she also believed that this increase was due to the students' "goal driven attitude." This teacher distributed 26 tickets throughout the intervention for academic engagement.

Furthermore, Science Teacher No. 1 indicated that tickets were distributed for attendance to students who had perfect attendance. There were 11 tickets distributed for attendance throughout the intervention. The teacher reported that the attendance for this class improved. This assumption was accurate. Attendance data revealed that there was an increase in the number of students who did not receive any tardies throughout the intervention. Initially, 62% of students did not have any tardies; however, after starting over with the intervention, this number increased to 69%.

Though this teacher indicated that students being out of their seats without permission, talking without permission, or arguing with students were not a problem,

there were no tickets distributed throughout the entire intervention to acknowledge students for displaying appropriate behavior. This type of behavior demonstrated by the teacher compelled the researcher wonder if there was bias regarding what the teacher thought students should be acknowledged for. It could have been possible that the teacher did not like to acknowledge students for appropriate behavior because the participant expected the students to know how to behave appropriately. Teacher bias was another area that should be explored in future research studies. This teacher reported experiencing fewer behavior issues while implementing PBIS in comparison to prior to implementing the intervention, and the participant reported having to write fewer office disciplinary referrals. The teacher also reported having a more positive classroom climate after starting the intervention, and reported that she spent less time calling parents to discuss behavior issues. This teacher indicated that she would recommend this intervention to other teachers and planned to implement a variation of the intervention again.

Science Teacher No. 2. When asked about the experiences with the five main behavior targets throughout the intervention, this teacher indicated that there was a decrease in tardiness, cell phone violations, students being out of their seat without permission, blurting out or talking without permission, and arguing with peers during instructional time. Specifically, the participant noticed that the tardiness decreased drastically for "repeat offenders," because these students indicated that they "did not want to write paragraphs." This teacher admitted that she did not consistently enforce the consequences for tardiness, because she lost "track of the tardies." Even though the INow database analysis system tracked the tardies that a student received, it was not apparent to the researcher that Science Teacher No. 2 did not know how to review that information

using the database until the data team meeting occurred mid-way through the intervention. Despite not knowing how to track the tardies, Science Teacher No. 2 stated, "I still continued to reward students who arrived to class on time with $100 paper money to be used as bonus points." The attendance data for this teacher's classes supported the claims that there was a decrease in tardiness for repeat offenders. Even though the participant was not consistent with enforcing the consequences for tardiness, she was consistent with enforcing the consequence for cell phone violations. Science Teacher No. 2 stated, "It only had to be done once in each of my classes for students to realize that the rule would be enforced." This consistency may have been the reason for the decrease in cell phone violations. Additionally, this teacher was also consistent with enforcing the consequences for students being out of their seat without permission. The teacher indicated, "I only had this issue with ninth grade students. I was consistent with enforcement and soon this was no longer an issue." This teacher had one ninth grade class and the other three classes contained juniors and seniors. Regarding students blurting out and talking without permission, this teacher also experienced a decrease. She stated, "Initially, I had several students receive this consequence, but this issue decreased drastically as the intervention proceeded. Furthermore, after starting the intervention and explaining the new consequence for arguing with peers during class time, this teacher did not have any issues with students disrupting class time with arguments.

Science Teacher No. 2 acknowledged students with tickets for each of the four areas including academic engagement, attendance, behavior, and academic performance. She indicated that she gave students a ticket for appropriate behavior "when students were following directions" which was one of the classroom expectations. She also

distributed tickets to students who "took the initiative to be peer helpers, cleaned their work areas in the lab and classroom." Cleaning their area prior to leaving class was another classroom expectation. In addition, this teacher also acknowledged "students who were on task working collaboratively in groups", and she acknowledged students who "came to class prepared." Coming to class prepared was another classroom expectation. Additionally, this teacher acknowledged students for their academic performance whenever they maintained a "C or above average in the class, had the highest scores on assessments, above average on tests, quizzes, and projects, and submitted meaningful or accurate reflections and exit slips." The teacher reported no significant changes in academic performance. The data revealed that there were slight decreases for class averages in each class. Regarding academic engagement, this teacher acknowledged students for academic engagement for "class participation, correctly answering questions during discussions or review sessions, for volunteering to explain scientific concepts, and following directions." She indicated that there was an increase in academic engagement, because students were "eager and excited to receive tickets." Additionally, this teacher distributed tickets for attendance to "students with no tardies and students who showed improvements with being tardy to class." Overall, this teacher reported having fewer disciplinary issues after the start of the intervention and indicated that she did not write any disciplinary referrals after implementing the intervention.

When asked about the classroom climate before and after the start of the intervention, Science Teacher No. 2 reported:

> "PBIS contributed to the conducive learning environment that was already set in place. My students felt safe and free to express themselves without ridicule

> or shame. I was able to continue to connect with my most difficult students. PBIS leveled the playing field, in regards to consequences, and made me less likely to be bias or show favoritism towards students."

This teacher also indicated that her relationships with students improved. Science Teacher No. 2 stated, "Throughout the intervention my most combative students did a complete 180, in regards, for my classroom, talking back, and their interactions with their peers. Additionally, this teacher reported that she spent less time calling parents to discuss behavior issues. The participant also stated that she would recommend implementing PBIS school-wide consistently. When asked about the strengths of PBIS, she indicated that rewarding and recognizing students for ideal behavior on a consistent basis was a main strength. She also thought that the new consequences for negative behavior was a strength, and she benefited from the data team meeting that allowed for her to see her data that revealed what she was acknowledging students for. When asked about the weaknesses associated with the intervention, Science Teacher No. 2 stated, "In my opinion, I feel it would have been beneficial for the students and teachers to be introduced to PBIS at the beginning of the semester." She also recommended that teachers be held accountable for their implementation of PBIS for maximum results.

Science Teacher No. 3. This participant reported a decrease in behavior issues concerning the main five target areas, and believed that the students were less likely to engage in the behaviors because "they did not want to experience the new consequences."

> "Prior to the start of the intervention, students' had to follow a three-step warning system when breaking a rule. First, they received a warning, followed by a one-on-one conference after class, followed by a phone call home. However, with

> the start of this intervention, all of those steps were skipped to get to the consequence. This removed the delayed timing of students receiving a consequence several days after an offense. With immediate restorative consequences, students were less likely to engage in each of the five inappropriate behaviors."

Regarding enforcing consequences, this teacher distributed tardy paragraphs to a total of eight students. Three of these students were in her first period class, three were in her fourth period class, and two were in her fifth period class. Science Teacher No. 3 stated, "After distributing paragraphs to the main students who had tardy issues in each of these class periods, tardiness decreased. I started to notice students running to get to my class on time, because they knew that I was serious about issuing those 25 tardy paragraphs once they received their third tardy." Regarding cell phone violations, the teacher reported, "Four cell phones were confiscated and submitted to the office for a parent to pick up. Each of these violations occurred in a different class. After these cell phones were confiscated, there were no longer any issues with cell phones." When asked about students being out of their seats without permission, this teacher indicated, "I initially had a major issue with students in my second period class being out of their seats without permission. This issue continued during the first two weeks of the intervention, but I consistently enforced the consequence for students to do either 25 push-ups or 25 squats at the end of class. After being tired of me holding them accountable for breaking a classroom rule, this issue ceased after week 2." The issue with students' blurting out or talking without permission drastically decreased during the first week of the intervention. The teacher stated, "Students began to appreciate class discussions more, because they did not have to be concerned with other students interrupting them while they were trying to express themselves." Science

Teacher No. 3 also indicated, "Students who hated to be interrupted thanked me for enforcing the consequence for students talking without permission, because they viewed this as a disruption to the learning environment." Additionally, after enforcing the consequences for students arguing with peers, Science Teacher No. 3 stated that she did not have to distribute paragraphs to any student for arguing.

Science Teacher No. 3 distributed tickets to acknowledge students for academic performance, academic engagement, attendance, and behavior. This teacher acknowledged students for academic performance whenever, "students received a C or higher on tests, quizzes, and lab reports." This teacher also reported that there were improvements in students' academic performance in three of four of her classes; this information was verified with the academic performance data submitted. The teacher indicated, "I acknowledged students for their academic engagement whenever they participated in class discussions, demonstrations, group activities, and whenever students served as peer tutors for their classmates." According to this teacher, academic engagement increased in her class. She stated, "Students in my AP Biology class were typically shy and did not like to participate in class demonstrations prior to the start of the intervention, but they knew that they would be acknowledged for their engagement so they started to participate more often." Science Teacher No. 3 distributed acknowledgement tickets for attendance whenever "students displayed improved daily attendance, improved on-time attendance, and for perfect attendance during the intervention." Regarding daily attendance, Science Teacher No. 3 stated that there were some students who missed several days of school each week prior to the start of the intervention. However, she indicated that these students were acknowledged when they came to school five consecutive days during the intervention.

For on-time attendance, Science Teacher No. 3 acknowledged students who were typically tardy daily prior to the intervention, but arrived to class on time after the start of the intervention. This teacher stated, "I also acknowledged students who no longer skipped my class; prior to the start of the intervention, there were two students in my fifth period class who routinely skipped Biology; however, they did not skip class during the intervention." At the end of week six, this teacher also distributed an acknowledgement ticket for attendance to every student who had perfect attendance throughout the entire intervention. This teacher reported improvements in students' attendance, and this statement was verified with attendance reports. Science Teacher No. 3 acknowledged students for behavior whenever "students followed instructions, appropriately interacted with peers during group activities, and followed lab safety rules." The teacher also indicated that she also "distributed tickets for behavior whenever I noticed that students were starting to misbehave in a class." "Instead of acknowledging every insignificant inappropriate behavior, I instead used my energy showing appreciation to the students who were behaving appropriately." This teacher reported a decrease in disruptive classroom behaviors and did not write any disciplinary referrals during the intervention.

Regarding classroom climate, Science Teacher No. 3 reported improvements for every class. The climate in her first period class improved because "students were more willing to participate in class activities whereas beforehand they were too shy." This improved the class climate, because students "realized that demonstrating scientific concepts helped them understand content material better than them listening to me lecture to them." The climate in her second period class improved because "students no longer engaged in argumentative behavior instead they began to serve as peer tutors and displayed

appropriate behavior while collaborating with others." The climate also improved because, "there were fewer disruptions during class discussions, because everyone waited for their term to speak."

> "Prior to the start of the intervention, I was exhausted with trying to get a few students in this class to remain seated, stop arguing, stop blurting out or talking with permission, and arrive to class on time, but after the intervention began I noticed a difference in the climate. I used the beginning of each class period to acknowledge students for either their attendance, behavior, academic performance, or academic engagement. It became a ceremony while I was taking attendance. Students clapped for each other when I acknowledged them and they actually congratulated each other. I became less stressed during the intervention, and students' behavior changed and they became more motivated to succeed."

The climate in Science Teacher No. 3's fourth period class did not change as much as the climate in her other classes. However, the climate in her fifth period class improved. According to Science Teacher No. 3, students in her fifth period class looked forward to the acknowledgement period at the beginning of each class period. "The students were eager to participate in class demonstrations and they looked forward to receiving a ticket for their academic engagement." For behavior, Science Teacher No. 3 reported that "students began to initiate negotiations for certain types of class activities during the intervention." For example, "students would ask if they could work with a partner of their choice because everyone was displaying appropriate behaviors." Science Teacher No. 3 also reported, "students in this class looked forward to the end of the class period on Friday, because the drawing for the week took place at the end of this class period."

Science Teacher No. 3 also indicated that after implementing PBIS, her relationships with students improved.

> "Initially, there were students who I had to reprimand frequently for not following classroom rules, for putting their head down instead of being academically engaged, for being habitually tardy, etcetera, but because the intervention compelled me to acknowledge students for different things I was able to build a better repertoire with students. For example, because I always reprimanded Johnny (pseudonym) for putting his head down instead of being academically engaged, I did not notice that he had perfect attendance. After the start of the intervention, I began acknowledging him for his attendance. This improved our relationship, because he knew that I at least noticed something positive about him. It made me focus on the positive actions of students instead of the negative behaviors."

Additionally, this teacher indicated that she would recommend the intervention to other teachers. Science Teacher No. 3 believed that the main strengths of the intervention were it provided an inexpensive way to acknowledge students for doing well and over time it reduced disruptive behaviors because the focus was on displaying appropriate behaviors. The weakness of this intervention was that it began in the middle of a semester instead of at the beginning.

Science Teacher No. 4. This teacher did not respond to interview questions. For this reason, the researcher used field notes to describe some of the experiences of this teacher. During brief discussions, Science Teacher No. 4 indicated, "I have not distributed

any tickets to some of my classes because they have not done anything to earn a ticket." Besides distributing the tickets only to certain class periods, the teacher also stated,

> "I haven't tried to assign students tardy paragraphs because I know that they are not going to write them. They are used to getting away with being tardy because the administrators do not send them to ISS after their third tardy like they are supposed to. Sam (pseudonym) has skipped my class every day and I write him up, but nothing is done about it. If admin does not do anything about it then I know they [students] aren't going to listen to me when I try to enforce a consequence."

Even though this teacher had four class periods of science classes similar to the number of students that Science Teacher No. 2 and 3 had, the number of tickets distributed to acknowledge students for the four indicators were extremely lower. Though attendance data was not submitted at the end of the intervention, this teacher stated that there were not improvements in attendance/tardiness during the intervention. When asked why not, the teacher responded, "I teach juniors and seniors, they don't care this time of the year."

Student Experiences

Weekly Drawings. When asked about students' reactions to winning a prize, Science Teacher No. 1 stated, "They loved it and were very competitive about it." This teacher also allowed students to open their gifts during the class period. At the end of the first week, she overheard some of her students say, "I want some school supplies." The prize for the first week included a locker bin with highlighters, pens, pencils, a locker decorator, notebooks, and a pack of chocolate candy. When students noticed that the prize was a good prize, it motivated them to become competitive. They also compared prizes, because the prizes changed each week. For example, Science Teacher No. 1 overheard

one of her students say, “Man, I got school supplies, she got cool feminine items.” The gift referenced included a mirror, a comb, a brush, hand sanitizer, chocolate, and a pack of tissues. Science Teacher No. 3 also experienced a similar competitive response at the end of week 1. When she distributed the gift, a student asked the winning student for her notebooks because he had lost his interactive science notebook. Science Teacher No. 3 said, “The students asked me if the winning student would receive the entire bin or if she had to pick an item. When I told them that she would receive the entire bin, they became competitive and wanted to receive a ticket.” Even though the students felt like the gift was a lot, the weekly gifts never exceeded $10.00. Science Teacher No. 2 also noticed that the students enjoyed being acknowledged. Science Teacher No. 2 stated that “Students were excited, appreciative, and all smiles. You could clearly tell they felt special.” While monitoring the halls, one of Science Teacher No. 4’s student told the researcher that he appreciated his gift and told her that he was acknowledged for his behavior. Additionally, another one of Science Teacher No. 4’s students told the researcher that she felt like the intervention was a really cool idea, but that she did not think that she would ever win anything because she did not think that Science Teacher No. 4 would actually distribute tickets in her class because the class was bad. One of Science Teacher No. 1’s students approached the researcher to ask if she could make sure that she won something because she always behaved appropriately. While presenting a student with a chick-fil-et gift card, the winning student asked Science Teacher No. 3, “How did you know that chick-fil-et was my favorite?” Similar to Science Teacher No. 2’s students, this particular student was very appreciative. Additionally, when Science Teacher No. 3 presented a student with a free movie ticket to a local theater, a classmate

stated, “That’s his favorite thing to do…to go to the movies. He be at the movies every weekend.” The researcher did not know that going to the movies was the students’ favorite thing to do, but the student was excited and planned to use the movie ticket during spring break. Overall, there were positive experiences with students when they received their prize for either attendance, behavior, academic engagement, or academic performance.

Intervention Celebration. At the end of the intervention, students received a ticket to attend a celebration if they met specific criteria. Science Teacher No. 1 indicated that, “They seemed to enjoy-some enjoyed the treats while others enjoyed the games!” Additionally, Science Teacher No. 2 stated, “Students were very appreciative and said thank you throughout the celebration. They seemed to enjoy the activities. Students were glad to be out of class, and be rewarded with ice cream, popsicles, music, and games.” Science Teacher No. 3 did not attend the celebration due to maternity leave; however, Science Teacher No. 2 sent her a video of the participating students in a group saying thank you for the celebration. Science Teacher No. 4 was absent from work the day of the celebration.

General Anecdotes. Throughout the intervention, students approached the researcher to share their appreciation for implementing an intervention that would finally allow them to receive recognition for their appropriate behavior. Students stopped by the researchers’ classroom to show their gifts and stated what they had been acknowledged for. Overall, these findings from the entire intervention are summarized in Table 5.16 below.

Table 5.16

Summary of Findings by Research Question

Research Question 1 What is the effect of using classroom-level PBIS on students' (a) incidences of disruptive classroom behaviors, (b) academic performance, (c) attendance, (d) educational engagement, (e) school climate, and (f) suspensions?	**Research Question 2** What is the effect of using classroom-level PBIS on teachers' (a) number of disciplinary referrals written and (b) level of preparedness?	**Research Question 3** What is the effect of using classroom-level PBIS on teachers' use of (a) preventive classroom management strategies, (b) initial correction strategies, (c) reward strategies, and (d) later correction strategies?	**Research Question 4** Was there a difference in number of disciplinary referrals written between teachers exposed to classroom-level PBIS and teachers not exposed to PBIS?	**Research Question 5** What were the participating teachers and students' experiences with PBIS?
(a) Disruptive classroom behaviors decreased in every category except for students using profanity and students increased their compliance (b) Academic performance increased in science classes where teachers acknowledged students for having a C or higher on assessments (c) Students' tardiness decreased for every science teacher. (d) There was a statistically significant difference in students' level of engagement at the end of the	(a) Science teachers reported a decrease in number of disciplinary referrals written. (b) Science teachers did not report an increase in level of preparedness in the area of classroom management.	(a) Science teachers reported a similar frequency use of preventive classroom management strategies at the beginning and end of the intervention except an increase in negotiating rules with students. (b) Science teachers reported an increase in student conferences and nonverbal body language, but a decrease in redirecting students and using proximity (c) Science teachers increased their use of reward classroom management strategies	This question was not answered due to invalid data and not receiving the reports from administrators.	Participating teachers would recommend that other teachers use classroom-level PBIS. Science teachers also reported an improved classroom climate and better relationships with students. Students were competitive and they enjoyed being acknowledged by receiving an acknowledgement ticket.

intervention in comparison to the start of the intervention. (e) There were not any statically significant differences in school climate. (f) Suspension data was not analyzed due to invalid data.	(d) Science teachers decreased their use of office disciplinary referrals, isolation, parent contact, but increased their use of behavior contracts.	Students also enjoyed participating in the end of the intervention celebration.

Discussion

Findings from this research study added to the literature, because there were not any other studies on using classroom-level PBIS in suburban high school settings with urban characteristics that focused on students in science classes. Not only was the context unique, but the implementation of the PBIS framework was also different. Typically, PBIS was used to focus mainly on acknowledging students for appropriate behavior, while this intervention focused on acknowledging students for their academic performance, behavior, attendance, and academic engagement. Furthermore, instead of focusing mainly on measuring disciplinary referrals and suspensions, this research study also added measuring disruptive classroom behaviors that typically result in referrals that ultimately leads to the suspensions. Furthermore, it measured teachers' frequency use of different types of classroom management strategies.

Attendance

Even though this study included unique focal points, the results from the intervention extended upon previous research studies. For example, students in science classes had a reduction in tardies; this was consistent with Caldarella, Schatzer, Gray, Young, and Young (2011) and Johnson-Gros, Lyons, and Griffin (2008) who also showed a decrease in students' tardiness after implementing PBIS. Additionally, Caldarella et al (2011) also showed a decrease in students' unexcused absences. Even though results from this study were consistent with other studies, it added to the literature because it focused on the classroom-level implementation of PBIS for a shorter length of time. The setting was also different. For example, Caldarella et al (2011) study involved the implementation of PBIS in a middle school over four years, while Johnson-Gros, Lyons,

and Griffin's (2008) study was implemented in a rural high school. Because of the reduction in tardies for science students, it may be beneficial for the administration to implement school-wide PBIS to show similar results for all students. This attendance component of this research study could also be extended to include measuring students' unexcused absences to determine if there would be similar results within this context. It may be worthwhile for teachers who experienced issues with tardies to implement PBIS on the classroom-level even if the framework was not implemented school-wide. Overall, tardiness has been shown to be a short-term outcome.

Behavior

Typically, the effect of PBIS on suspensions and office disciplinary referrals was measured to assess students' change in behavior school-wide; however, few PBIS studies focused on measuring the frequency of disruptive behaviors that occurred at the classroom-level in urban-like suburban high schools. Närhi, Kiishki, Peitso, and Savolainen (2014) showed a reduction in disruptive behaviors after implementing a class-wide PBIS in middle schools, but this study added to the literature by measuring disruptive behaviors at the high school level. Science students decreased their frequency of getting out of their seats without permission, talking without permission, blurting out answers, arguing with peers, arguing with the teacher, etcetera; however, math teachers reported an increase in these disruptive classroom behaviors. These behaviors contributed to the disciplinary referrals that teachers wrote. Consist with Flannery et al (2014) and Swain-Bradway, Pinkney, and Flannery (2015), there were reductions in disciplinary referrals written based upon science teachers' self-report. Because sufficient data reports for suspensions were not available, it may be beneficial for participating science teachers

to continue implementing the intervention, but they should measure suspensions and number of disciplinary referrals written as well.

Academic Performance

Two science teachers reported decreases in academic performance, while one teacher reported improvements. Despite experiencing decreases in academic performance for every class, Science Teacher No. 1 and Science Teacher No. 2 acknowledged students more for their academic performance in comparison to acknowledging students for their attendance, behavior, and academic engagement. Based upon their interview responses, teachers acknowledged students differently for their academic performance. For example, Science Teacher No. 1 and Science Teacher No. 2 acknowledged students if they made an A on a test or had the highest average on an assessment, while Science Teacher No. 3 acknowledged every student that made an A, B, or C on tests, lab reports, projects, and quizzes. These differences in acknowledgement explained why Science Teacher No. 3 had increases in class averages while the other teachers did not experience increases. Furthermore, Science Teacher No. 3 acknowledged more students for their academic performance in comparison to the other teachers.

When reviewing math teachers' academic performance data, three of the math teachers experienced increases in their classes averages. For example, Math Teacher No. 4 experienced increases in three classes. Math Teacher No. 5 and Math Teacher No. 6 experienced an increase in one of their class averages. This increase in academic performance could have been due to diffusion. For example, some students had a participating science teacher and a participating math teacher. Math Teacher No 4's first period math class had a 67% overlap with Science Teacher No. 3's students. Additionally,

Math Teacher No. 4's third period class had a 24% overlap with participating science teachers. Math Teacher No. 4's fourth period class also had a 26% overlap between with the participating science teachers. Furthermore, Math Teacher No. 5's second period class that experienced an increase in academic performance had a 14% overlap in students, while Math Teacher No. 6's second period math course had 63% of the same students as Science Teacher No. 3. Because these students were being acknowledged for their academic performance in their science classes, they could have been more motivated to achieve in their other courses.

Even though there were inconsistencies regarding the impact of using classroom-level PBIS on academic performance within this context, previous research suggested that PBIS improved academic performance. However, the main difference was the length of time required to obtain those results. For example, Polirstok and Gottlieb (2006) revealed an increase from 28.8% to 32.3% in students' reading scores for three different schools who participated in PBIS interventions, while there was a decline from 39.2% to 37.7% in students' reading scores when compared to other schools in the same district who were not exposed to PBIS. These changes in reading scores were compared over a two-year period (Polirstok & Gottlieb, 2006).

Moving forward, the participants in this research study may want to continue to implement classroom-level PBIS for a longer length of time and they may begin to experience an increase in academic performance similar to other studies. Additionally, Polirstok and Gottlieb (2006) showed that there were greater improvements in academic performance when the principals were more involved with the implementation of PBIS. It may also be beneficial for teachers to acknowledge students more for satisfactory work, a

C on higher on assessments. This could possibly motivate students to excel academically. It may also be worthwhile to explore the impact that acknowledging students for A's and B's verses acknowledging them for A's, B's, and C's could have on overall academic performance.

Educational Engagement

Similar to Radley et al (2015), this study defined academic engagement as students actively participating in class activities. However, instead of completing observations to measure academic engagement time, this research study assessed science teachers' view of students' academic engagement within their individual classrooms, and assessed students' perceptions of their overall educational engagement. Teachers reported an increase in students' academic engagement and teachers acknowledged students for their academic engagement using acknowledgement tickets throughout the intervention. In addition to these positive results, science students experienced a statistically significant increase in educational engagement while participating in a classroom-level PBIS intervention. This added to the research literature, because it showed that changes can occur in students' level of educational engagement within a short period of time. If the intervention is expanded from classroom-level to a school-wide level it would be interesting to determine how the entire student body's level of educational engagement changes.

Classroom Management Strategies

Teachers' classroom management skills were critical for addressing misbehavior. Woodcock and Reupert (2013) explored the differences between pre-service teachers finishing a four-year education program and a one-year graduate education regarding their

use of preventive classroom management strategies, reward strategies, initial correction strategies, and later correction strategies. Instead of focusing on the differences in frequency of each of these types of classroom management strategies based on length of training, this study focused on how using classroom-level PBIS impacted the frequency of teachers' implementation of each classroom management strategy. Woodcock and Reupert (2013) revealed a significant difference between one-year graduate trained pre-service teachers and four-year trained pre-service teachers with the teachers receiving more training reporting a higher frequency and confidence level for using preventive strategies (Woodcock & Reupert, 2013). This study did not experience the same results, but this could have been due to teachers participating in a different type of behavior intervention. Despite not getting the exact same results with additional training leading to an increase in teachers' use of preventive strategies, science teachers did increase their use of reward strategies which was expected because the PBIS framework promoted rewarding and acknowledging students. However, math teachers decreased their use of reward strategies. The science teachers also increased their initial correction strategies, but decreased their use of later correction strategies. There was not much change in teachers' report concerning their use of preventive classroom management strategies. Additionally, science teachers' report of their level of preparedness for classroom management did not increase.

School Climate

Previous research studies have shown the impact of School-Wide PBIS on school climate (Flannery et al., 2014; Swain-Bradway, Pinkney, & Flannery, 2015). Additionally, Närhi et al (2015) showed a reduction in the time required to promote a positive learning climate when implementing class-wide PBIS in middle schools. However, science

students in this research study did not show any statistically significant improvements in school climate. These differences could have been due to other PBIS studies having a longer implementation period while this study was only six weeks. Despite science students not showing significant improvements in school climate, science teachers reported improvements in their classroom climate. Because exposure to PBIS served as a statistically significant predictor of improved school climate, the participants should continue to implement the intervention for a longer length of time.

Experiences with PBIS

Similar to previous PBIS research studies, implementing PBIS required the buy-in of participating teachers and administrators in order for fidelity of implementation to occur. At the beginning of this research study, there were five participating science teachers. Due to a lack of participation and low implementation of the intervention, one science teacher was removed from the study. Prior to missing a week of school due to an illness, this science teacher only distributed two acknowledgement tickets. The lack of participation could have been due to several factors. Swain-Bradway et al (2015) indicated that some teachers did not think that it was necessary to reward students for demonstrating appropriate behaviors since they were in high school. Furthermore, Polirstok and Gottlieb (2006) revealed that principals reported that they believed that the teachers who stopped participating in a PBIS intervention thought that implementing PBIS was unsuccessful, because they were expecting immediate elimination of misbehavior. Besides some teachers quitting, there was a group of teachers who implemented the intervention inconsistently and another group who consistently implemented the intervention (Polirstok & Gottlieb, 2006). There were similar patterns

shown within this intervention. One teacher stopped implementation, one teacher implemented it throughout the entire intervention but the implementation was lower or inconsistent, and three teachers were consistent and dedicated more time for adjustments to their classroom management. Teachers had to believe that the intervention would be effective and they had to feel like it was worthwhile for them to dedicate the time needed to effectively implement PBIS strategies.

The three science teachers who were dedicated to the intervention experienced decreased disruptive classroom behaviors, decrease in disciplinary referrals written, improved on-time arrival to their class, improved classroom climate, and there was an increase in students' educational engagement. Overall, the three committed teachers indicated that they would recommend PBIS to other teachers. Based upon teachers' response to interview questions, students were very responsive to receiving acknowledgement tickets, receiving a prize if their name was drawn, and being invited to a celebration for appropriate behavior. Other studies should probably determine the best personality type that is associated with better implementation of PBIS.

Limitations

There were several limitations for this study. The first limitation involved the recruitment of participants. Due to only having one break during the school day, the researcher was unable to recruit the maximum number of student participants who were assigned to a participating math or science teacher. As a result, students received the parental-opt out form from their assigned teacher. This meant that the forms were distributed to students based upon when it was convenient for the teacher. Additionally, there were limitations with recruiting teacher participants. Initially, the plan was to have

every science teacher in the treatment group; however, one teacher did not want to participate and another science teacher was removed from the study due to a lack of participation. In addition, at the start of the intervention, seven out of eight math teachers agreed to participate in the study; however, one of the original seven math teachers was excluded for lack of data. These issues with recruitment led to a small sample size for teachers. Furthermore, teachers and students completed questionnaires. Because this involved self-reporting some of the responses could have been false. Initially, the researcher planned to complete weekly reflections with the participating science teachers; however, this did not occur consistently due to teachers being unavailable to meet after school. To add, the researcher also conducted interviews via email instead of in-person interviews due to being on maternity leave. This limited the richness of the qualitative data. Furthermore, the researcher was not able to conduct student focus group sessions due to maternity leave. Instead the researcher was limited to receiving information from the teachers concerning students' experiences and using field note observations.

Implications for Practice

If implementing this intervention in the future, the researcher would recommend that the intervention begin at the start of a school year. Starting at the beginning of the school year would be better because teachers would have a consistent plan to implement for classroom management. It is difficult to change a classroom management plan at the end of a school year. This would also be beneficial for recruiting teachers to participate. Teachers are more likely to be willing to try something new when they can plan prior to the first day of school. Furthermore, extending the intervention beyond six weeks is recommended because it would possibly allow for a change in school climate and more

improvements in students' academic performance. The researcher would also recommend incorporating more data team meetings with administrators being present to share disciplinary, academic, and attendance reports. Having more data team meetings for participating teachers would be useful, because this would allow the teachers to review acknowledgement data as well as review other data to help drive their implementation of preventive and reward classroom management strategies. The regular review of data would allow for meaningful distribution of acknowledgement tickets. To keep teachers engaged throughout the intervention, it may also be beneficial to send emails to the participating teachers regularly with instructions to distribute a ticket for a specific indicator. This may help with removing the bias associated with only acknowledging students for academic performance or academic engagement. Instead it may force teachers to think about the students who behave appropriately and attend school frequently. To ensure that participating teachers have the support that they need, it is recommended that the researcher have the same planning period as the participating teachers. This would allow for sufficient collaboration.

Implications for Future Research

Future research studies should include a larger sample size for teachers in the treatment and comparison groups. Since this study only focuses on the implementation of PBIS on a classroom-level and its effects on disruptive behaviors, attendance, academic performance, and academic engagement, future students should focus on the school-wide implementation of PBIS and its effect on each of the four indicators. Additionally, it may be meaningful to explore the effect of the length of the intervention on determining when there starts to be a change in school climate. Future studies should also explore the effects

of using classroom-level PBIS on teachers' use of disciplinary referrals as well as the impact of the intervention on suspensions when it is implemented at the classroom-level.

Conclusion

Overall, using classroom-level PBIS revealed positive results. Students reduced their number of tardies, decreased their frequency of disruptive classroom behaviors, experienced statistically significant improvement in level of educational engagement, and some students improved their academic performance. Additionally, teachers increased their use of reward classroom management strategies in comparison to other strategies and reported writing fewer disciplinary referrals. Teachers also reported positive experiences with implementing the intervention. PBIS was also shown to be a statistically significant predictor of improved school climate. Moving forward, implementation of this intervention within this context could help reduce tardies and disruptive classroom behaviors school-wide while improving students' level of educational engagement. These changes due to the intervention could ultimately address the overarching issue which was reducing the racial disparity concerning students receiving exclusionary discipline actions that resulted in poor academic performance. Since classroom-level PBIS has shown improvements for addressing the disruptive classroom behaviors that were resulting in teachers within this context writing disciplinary referrals, long-term implementation of this intervention could show decreases in number of referrals written school-wide as well as a decrease in suspensions. These changes would begin to reduce the racial disparity issues concerning discipline. It should also eventually reveal improvements in students' academic performance.

Appendix A

Teacher Questionnaire

The purpose of this questionnaire is to examine factors that attribute to the problem of students' disruptive classroom behavior at Excellence High School. Data collected with this survey will be used to explore the potential for professional develop around managing student's classroom behavior. Your response to this questionnaire will contribute to data collection for the purposes of a dissertation. This questionnaire will be kept confidential. If you have any questions please contact Briauna Knott Scott at bknott1@jhu.edu. Thank you in advance for your participation in this questionnaire.

Instructions: Circle the answer each question to the best of your ability. This questionnaire should not take longer than 30 minutes.

General Questions

1. You are
    - Male
    - Female
2. Are you Hispanic/Latino(a)?
    - Yes
    - No
3. What is your race/ethnicity?
    - African America
    - White
    - Asian
    - More than one race
    - Other
4. What is your age?
    - 22-30
    - 31-40
    - 41-50
    - 51-60
    - 61 and above
5. Which subjects do you teach?
    - Science
    - English
    - Social Science
    - Mathematics
    - Physical Education
    - Fine Arts
    - Career Tech
    - Foreign Language
    - Special Education

6. What is your highest level of degree obtained?
    - Bachelor's
    - Master's
    - Education Specialist
    - Doctorate
7. How many years of teaching experience do you have outside of student teaching?
    - 0-5
    - 6-10
    - 11-15
    - 16-20
    - 21 and above
8. Which of the following best describes your teacher certification?
    - Traditional teaching certification
    - Alternative teaching certification
    - Emergency certification
    - Career/Technical certification

Classroom Management

9. In how many classes have you assigned seats for every student?
    - None
    - 1 class
    - 2 classes
    - 3 classes
    - 4 classes
10. Do you have routine procedures students must follow when leaving the classroom to go to the restroom? (i.e. restroom vouchers, tickets, etc.)
    - Yes
    - No
11. Do you have routine procedures students must follow when they enter class late? (i.e. sign in sheet)
    - Yes
    - No
12. Do you have classroom rules and procedures posted for students?
    - Yes
    - No
13. How long do you spend at the beginning of the semester informing students of classroom rules, expectations, and procedures?
    - less than 1 week
    - 1 week
    - 2 weeks
    - More than 2 weeks

14. How frequently do you review classroom rules, expectations, and procedures throughout the semester with the students?
    - Once a week
    - Once a month
    - Every time a student breaks a classroom rule.
    - Only after long weekends and holiday breaks
    - Other

Classroom Management Needs and Support

Instructions: For questions 15-21, circle the number that indicates how much you agree or disagree with. Each statement is referring to how you feel about managing misbehavior at Excellence High School.

15. I feel prepared to manage my classroom.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

16. The strategies I learned for managing misbehavior in the classroom have been insufficient for addressing misbehavior.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

17. I experience difficulties managing misbehavior in classes with more than 30 students.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

18. Most of the referrals that I write are in the classes with more than 30 students.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

19. Male students tend to be more disruptive than female students.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

20. I believe that the school needs to hold a professional development session on managing student misbehavior.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

21. I feel stressed when students do not comply with directions.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Perceptions of Misbehavior that Occurs in the Classroom

Instructions: For questions 22-39, circle the number that indicates how much you agree or disagree. Each statement is referring to how you feel about the reasons for disruptive classroom behavior.

22. Students at Excellence High School are generally well behaved.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

23. Students will misbehave to get the attention of their friends.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

24. Students misbehave in class when the lesson for the day is boring.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

25. Students misbehave in class when they do not like the teacher.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

26. Students misbehave in class when they do not like the subject (i.e. math, science, etc.).

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

27. Students misbehave in class when they do not understand the content being taught.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

28. Students misbehave in class when they do not like the instructional strategies used by the teacher. (i.e. lecture, activity, debate, etc.)

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

29. Students misbehave in class when they do not think that the teacher cares about them.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

30. Students misbehave in class when they want to get the attention of the teacher.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

31. Students are more likely to pay attention to the teacher when the lesson challenges them.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

32. Students misbehave in class when they are mad about something that happened at home.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

33. Students misbehave in class when they do not respect the teacher.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

34. Students misbehave in class when there is a lot of free time in class.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

35. Students follow the rules when enforced.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

36. Students misbehave in class when they do not feel like they belong at the school.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

37. Students misbehave in class when the size of the class has more than 30 students.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

38. Students behave better in class when the teacher has high expectations for the students.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

39. Students behave better in classes that have routine classroom procedures. (i.e. restroom policies, tardy policies, etc.)

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Appendix B

Revised Teacher Questionnaire

The purpose of this questionnaire is to examine factors that attribute to the problem of students' disruptive classroom behavior at Excellence High School. Data collected with this survey will be used to explore the potential for professional develop around managing students' classroom behavior. Your response to this questionnaire will contribute to data collection for the purposes of a dissertation. This questionnaire will be kept confidential. If you have any questions please contact Briauna Knott Scott at bknott1@jhu.edu. Thank you in advance for your participation in this questionnaire.

Instructions: Circle the answer to each question to the best of your ability. This questionnaire should not take longer than 20 minutes.

General Questions

1. You are:
    - Male
    - Female
2. Are you Hispanic/Latino(a)?
    - Yes
    - No
3. What is your race/ethnicity?
    - African American
    - White
    - Asian
    - More than one race
    - Other
4. What is your age?
    a. 22-30
    b. 31-40
    c. 41-50
    d. 51-60
    e. 61 and above

5. Which subjects do you teach?
    a. Science
    b. English
    c. Social Science
    d. Mathematics
    e. Physical Education
    f. Fine Arts
    g. Career Tech
    h. Foreign Language
    i. Special Education
    j. Other
6. What is your highest level of degree obtained?
    a. Bachelor's
    b. Master's
    c. Education Specialist
    d. Doctorate
7. How many years of teaching experience do you have outside of student teaching?
    a. 0-5
    b. 6-10
    c. 11-15
    d. 16-20
    e. 21 and above
8. Which of the following best describes your teacher certification?
    a. Traditional teaching certification
    b. Alternative teaching certification
    c. Emergency certification
    d. Career/Technical certification

Classroom Management

9. In how many classes have you assigned seats for every student?
    a. None
    b. 1 class
    c. 2 classes
    d. 3 classes
    e. 4 classes
    f. Not applicable (i.e. resource room, gym)

10. Do you have routine procedures students must follow when leaving the classroom to go to the restroom? (i.e. restroom vouchers, tickets, etc.)
    a. Yes
    b. No
11. Do you have routine procedures students must follow when they enter class late? (i.e. sign in sheet)
    a. Yes
    b. No
    c. Not applicable (i.e. resource room)
12. Do you have classroom rules and procedures posted for students?
    a. Yes
    b. No
13. How long do you spend at the beginning of the semester informing students of classroom rules, expectations, and procedures?
    a. less than 1 week
    b. 1 week
    c. 2 weeks
    d. More than 2 weeks
14. How frequently do you review classroom rules, expectations, and procedures throughout the semester?
    a. Daily
    b. Once a week
    c. Once a month
    d. Every time a student breaks a classroom rule.
    e. Only after long weekends and holiday breaks
    f. Other

Classroom Management Needs and Support

Instructions: For questions 15-21, circle the number that indicates how much you agree or disagree. Each statement is referring to how you feel about managing misbehavior at Minor High School.

15. I feel prepared to manage my classroom.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

16. The strategies I learned for managing misbehavior in the classroom have been insufficient for addressing misbehavior.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

17. I experience difficulties managing misbehavior in classes that have more male students than female students**.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

18. I believe that the school needs to hold a professional development session on managing student misbehavior.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

19. I feel stressed when students do not comply with directions.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

20. I experience difficulties managing misbehavior in my larger classes more than my smaller classes.

1	2	3	4	5	6
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not applicable

21. The class averages are higher for my classes that have fewer students.

1	2	3	4	5	6
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable

Perceptions of Misbehavior Occurs in the Classroom

Instructions: For questions 22-40, circle the number that indicates how much you agree or disagree. Each statement is referring to how you feel about the reasons for disruptive classroom behavior at Excellence High School.

22. Male students tend to be more disruptive than female students.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

23. Students at Excellence High School are generally well behaved.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

24. Students will misbehave to get the attention of their friends.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

25. Students misbehave in class when the lesson for the day is boring.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

26. Students misbehave in class when they do not like the teacher.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

27. Students misbehave in class when they do not like the subject (i.e. math, science, etc.).

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

28. Students misbehave in class when they do not understand the content being taught.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

29. Students misbehave in class when they do not like the instructional strategies used by the teacher. (i.e. lecture, activity, debate, etc.)

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

30. Students behave better in class when they think that the teacher cares about them.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

31. Students misbehave in class when they want to get the attention of the teacher.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

32. Students are more likely to pay attention to the teacher when the lesson is engaging.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

33. Students misbehave in class when they are mad about something that happened at home.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

34. Students misbehave in class when they do not respect the teacher.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

35. Students misbehave in class when there is free time.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

36. Students follow the rules when enforced.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

37. Students misbehave in class when they do not feel like they belong at the school.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

38. Students are more likely to exhibit off task behavior in larger classes**.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

39. Students behave better in class when the teacher has high expectations for the students.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

40. Students behave better in classes that have routine classroom procedures. (i.e. restroom policies, tardy policies, etc.)

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Appendix C

Student Questionnaire

The purpose of this questionnaire is to examine factors that attribute to classroom behavior at Excellence High School. Your responses to this questionnaire will help to gain insight into student behavior. Your response to this questionnaire will contribute to data collection for the purposes of a dissertation. This questionnaire is anonymous and will be kept confidential. If you have any questions please contact Briauna Knott Scott at bknott1@jhu.edu. Thank you in advance for your participation in this questionnaire.

Instructions: Circle the answer to all questions to the best of your ability. The questionnaire should take approximately 30 minutes.

General Questions:

1. Are you:
   - Male
   - Female
2. What is your grade level?
   - 9th
   - 10th
   - 11th
   - 12th
3. Are you Hispanic/Latino(a)?
   - Yes
   - No
4. What is your race/ethnicity?
   - African American
   - White
   - Asian
   - More than one race
   - Other
5. What is your cumulative grade point average?
   - 3.5-4.0
   - 3.0-3.4
   - 2.5-2.9
   - 2.0-2.4
   - Below 2.0
6. Do you receive Free or Reduced Lunch?
   - Yes
   - No

7. Which of the following best describes your family structure at home?
   - Single Parent Household
   - Married Parents
   - Biological parent and step parent
   - Foster Care
   - Other

School Belonging at Excellence High School

For questions 8-25, circle the number that indicates how much you agree or disagree with. Each statement is referring to how you feel about your school belonging at Excellence High School. The Psychological Sense of School Membership (PSSM) Scale (Goodenow, 1993) is being used.

8. I feel like a real part of Excellence High School.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

9. People here notice when I'm good at something.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

10. It is hard for people like me to be accepted here.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

11. Other students in this school take my opinions seriously.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

12. Most teachers at this school are interested in me.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

13. Sometimes I feel as if I don't belong here.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

14. There's at least one adult in this school I can talk to if I have a problem.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

15. People at this school are friendly to me.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

16. Teachers here are not interested in people like me.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

17. I am included in lots of activities at this school.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

18. I am treated with as much respect as other students.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

19. I feel very different from most other students here.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

20. I can really be myself at this school.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

21. The teachers here respect me.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

22. People here know I can do good work.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

23. I wish I were in a different school.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

24. I feel proud of belonging to this school.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

25. Other students here like me the way I am.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

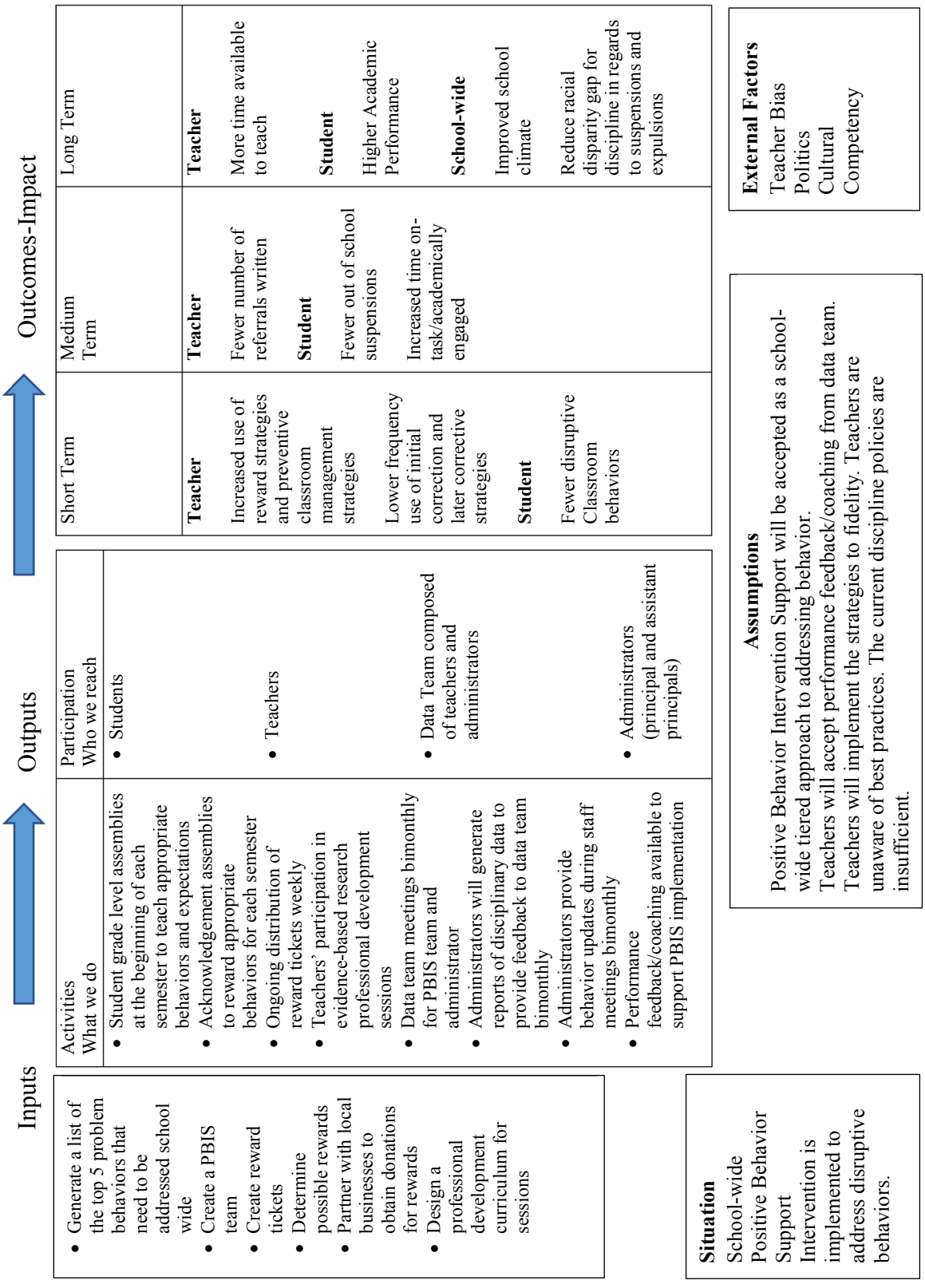
Perceptions of Classroom Behavior at Excellence High School
For questions 26-45, state your agreement with the following statements by circling your answer.

Survey Item	Scale				
	1=Strongly Disagree; 5= Strongly Agree				
26. Teachers create a positive learning environment for me	1	2	3	4	5
27. When a student is disruptive in class, no one is able to learn	1	2	3	4	5
28. Students usually disrupt class because they want attention	1	2	3	4	5
29. When a teacher enforces the rules in class, students do not disrupt class	1	2	3	4	5
30. When a student disrupts class, my teacher does not know what to do	1	2	3	4	5
31. Students disrupt class when they are bored	1	2	3	4	5
32. Students would never disrupt class when they like the teacher	1	2	3	4	5
33. Students are generally well behaved in class	1	2	3	4	5
34. When students misbehave in class, it is usually because their friends are misbehaving.	1	2	3	4	5
35. In the majority of my classes, teachers have high expectations of their students	1	2	3	4	5
36. Students do not misbehave when the teacher treats them with respect	1	2	3	4	5
37. I can pay attention in class, even when others are being disruptive	1	2	3	4	5
38. Students act out in class when they are having trouble at home	1	2	3	4	5
39. I think most students misbehave in class when they don't think the teacher cares about them	1	2	3	4	5
40. Students will not act out if they know they will be sent to the principal	1	2	3	4	5

41. Students only misbehave when the teacher lectures in class	1	2	3	4	5
42. Students only misbehave in the classes that they don't like	1	2	3	4	5
43. I find it hard to pay attention in class when students are disruptive	1	2	3	4	5
44. Teachers only pay attention to students who misbehave	1	2	3	4	5
45. When a student misbehaves in class, that student will be punished	1	2	3	4	5

Appendix D

Logic Model: Positive Behavior Intervention Supports



Appendix E

Teacher Interview Questions

1. During the professional development session, we collaboratively focused on five areas that were a concern in our classrooms. These included tardiness, cell phone violations, students being out of their assigned seat without permission, students' blurting out or talking without permission during lessons, and students unapologetically insulting peers or arguing with classmates. For each of these five areas, state whether or not you experienced an increase, decrease, or the same frequency of behavior while implementing the intervention. Why do you think you experienced these changes?
    a. **Tardiness:**
    b. **Cell phone violations:**
    c. **Out of Seat:**
    d. **Blurting out/talking without permission:**
    e. **Arguing/ unapologetically insulting peers:**

2. During the professional development session, we collaboratively determined the consequences for addressing each of the main five behavior issues. Use the space below to indicate whether or not you enforced these consequences and if so how often.

Behavior	**Consequence**	**Did you enforce the consequence? Why or why not? How often?**
Tardiness	After 3 tardies, students will write 25 tardy paragraph.	
Cell Phone Violation	Phone will be confiscated and submitted to the office	
Out of Seat	25 push-ups or quats	
Blurting out/talking without permission	25 push-ups or quats	
Arguing or unapologetically insulting peers	25 paragraphs on argumentative behavior	

3. Throughout the intervention, you distributed tickets for appropriate behavior, academic performance, academic engagement, and attendance.
   Provide examples of when you distributed tickets for each of the above categories.
4. Have you noticed a difference in students' level of academic engagement during the intervention? If so explain how it has been different (increase or decrease)? Be specific and feel free to discuss different classes.
5. Have you noticed a difference in students' attendance (daily or tardies) since implementing the intervention? Is so describe the differences (increase or decrease). Be specific and feel free to discuss different classes.
6. How has your class' academic performance changed while implementing PBIS? Be specific (increase or decrease). You can discuss different classes.
7. Have you experienced fewer behavior issues while implementing PBIS in comparison to prior to implementing PBIS?
8. Did you write fewer office disciplinary referrals after implementing the intervention?
9. Each week students were given a gift if their name was drawn from the PBIS dropbox. Describe the reactions of students when they received a gift.
10. At the end of the intervention, students were invited to attend a celebration if they did not receive a disciplinary referral, go to ISS, get suspended, or have more than 3 tardies in your class. Describe the reactions of students who were invited to attend the celebration. Feel free to share anecdotes.
11. How would you compare your classroom climate while implementing PBIS to when you did not implement PBIS?
12. Do you think that by participating in the intervention that it improved your relationships with students? If so how?
13. Would you recommend PBIS to other teachers?
14. Do you think that by implementing PBIS, you spent less time calling parents to discuss behavior issues?
15. What were the strengths and weaknesses of implementing PBIS?

Appendix F

Weekly Teacher Reflection Journal Questions

- How was your students' behavior this week?
- What are some of the challenges that you encountered this week?
- What do you need my assistance with?

Appendix G

Potential Student Rewards

Free admissions to school events

Free school t-shirts

Special seating during lunch with friends

Listen to music in class while working

Drop lowest test grade

Sit in the teachers' chair for a class period

Sit in the scorebox at the football game

Singing karaoke during lunch with approved songs

Hall monitor for a period

Extra credit

$5.00 gift card to fast food restaurant

Big Events

Water balloon fight

Movie and Popcorn during school with a reward celebration

Field Day

Appendix H

Teacher Questionnaire

The purpose of this questionnaire is to explore teachers' use of types of classroom management strategies and to examine the types of disruptive classroom behaviors that teachers address. Data collected with this questionnaire will be used for the purposes of a dissertation. However, this questionnaire will be kept confidential. If you have any questions, please contact Briauna Knott Scott at bknott1@jhu.edu. Thank you in advance for your participation in this questionnaire.

Instructions: Circle your answer to each question. This questionnaire should not take longer than 15 minutes to complete.

General Questions

1. You are:
    a. Male
    b. Female
2. Are you Hispanic/Latino(a)?
    a. Yes
    b. No
3. What is your race/ethnicity?
    a. African American
    b. White
    c. Asian
    d. More than one race
    e. Other
4. What is your age?
    a. 22-30
    b. 31-40
    c. 41-50
    d. 51-60
    e. 61 and older
5. What is your highest level of degree obtained?
    a. Bachelor's
    b. Master's
    c. Education Specialist
    d. Doctorate
6. How many years of teaching experience do you have outside of student teaching?
    a. 0-5
    b. 6-10
    c. 11-15
    d. 16-20
    e. 21 and above

7. I feel prepared to manage my classroom
    a. Strongly disagree
    b. Disagree
    c. Neutral
    d. Agree
    e. Strongly agree

Classroom Management Strategies (adapted from Woodcock and Reupert, 2013)

Instruction: Rate your frequency use of the following strategies.

8. I teach students appropriate behavior.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

9. I establish routine classroom procedures.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

10. I negotiate classroom rules with students.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

11. I distribute token rewards to students.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

12. I implement a merit system within my class.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

13. I distribute educational rewards.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

14. I talk things over with students after class when there is a behavior issue.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

15. I use nonverbal body language to address inappropriate behaviors.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

16. I redirect students.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

17. I move closer to students when they are demonstrating inappropriate behaviors.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

18. I contact parents regarding students' disruptive classroom behaviors.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

19. I have students to sign behavior contracts.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

20. I put students in isolation.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

21. I refer students to the principal.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

Disruptive Classroom Behaviors (adapted from Radley, Dart, & O'Handley, 2016 definition of disruptive classroom behaviors).

22. Students leave their assigned seats without permission.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

23. Students talk in class without permission.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

24. Students have their head down during class.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

25. Students use profanity in class.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

26. Students talk while I am trying to teach.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

27. Students blurt out answers to a question without raising their hands.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

28. Students enter class late.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

29. Students argue with classmates.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

30. Students comply with my instructions the first time given.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

31. I send students to the office for dress code violations.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

32. Students become argumentative with me when I am correcting inappropriate behavior.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

33. Students are tardy to class.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

34. Students come to class unprepared.

1	2	3	4	5
Not at all	Very rarely	Occasionally	Frequently	Very Frequently

Free Response Instructions: Use the space below to write a reflection of your experiences with implementing PBIS.

Appendix I

Student Questionnaire

The purpose of this questionnaire is to examine students' perceptions of school climate and educational engagement at Excellence High School. Your response to this questionnaire will contribute to data collection for the purposes of a dissertation. This questionnaire is anonymous and will be kept confidential. If you have any questions, please contact Briauna Knott Scott at bknott1@jhu.edu. Thank you in advance for your participation in this questionnaire.

Instructions: Circle the answer to all questions to the best of your ability. The questionnaire should take approximately 20 minutes.

General Questions:

1. Are you:
    - Male
    - Female
2. What is your grade level?
    - 9th
    - 10th
    - 11th
    - 12th
3. Are you Hispanic/Latino(a)?
    - Yes
    - No
4. What is your race/ethnicity?
    - African American
    - White
    - Asian
    - More than one race
    - Other
5. What is your cumulative grade point average?
    - 3.5-4.0
    - 3.0-3.4
    - 2.5-2.9
    - 2.0-2.4
    - Below 2.0
6. Do you receive Free or Reduced Lunch?
    - Yes
    - No

7. Which of the following best describes your family structure at home?
    - Single Parent Household
    - Married Parents
    - Biological parent and step parent
    - Foster Care
    - Other

School Climate Scale

For questions 8-16, circle the number that indicates how much you agree or disagree with. Each statement is referring to how you think and feel about things at Excellence High School. The School Climate Scale was obtained from La Salle, McIntosh, and Eliason (2016).

8. I like school.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

9. I feel successful at school.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

10. I feel my school has high standards for achievement.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

11. My school sets clear rules for behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

12. Teachers treat me with respect.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

13. The behaviors in my class allow the teachers to teach.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

14. Students are frequently recognized for good behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

15. School is a place at which I feel safe.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

16. I know an adult at school that I can talk with if I need help.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Educational Engagement-Teen Survey

For questions 17-22, circle the number that indicates how often this has happened this school year at Excellence High School. The Educational Engagement-Teen Survey was developed by Child Trends for the Flourishing Children Project.

17. How often do you care about doing well?

1	2	3	4	5
None of the Time	A little of the time	Some of the time	Most of the time	All of the time

18. How often do you pay attention in class?

1	2	3	4	5
None of the Time	A little of the time	Some of the time	Most of the time	All of the time

19. How often do you go to class unprepared?

1	2	3	4	5
None of the Time	A little of the time	Some of the time	Most of the time	All of the time

Please indicate how much you agree or disagree with the following statement.

20. If something interest me, I try to learn more about it.

1	2	3	4	5
Strongly disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Strongly agree

21. I think the things I learn at school are useful.

1	2	3	4	5
Strongly disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Strongly agree

22. Being a student is one of the most important things to me.

1	2	3	4	5
Strongly disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Strongly agree

Appendix J

Descriptive Statistics for Student Participants' Pre-Test

Table J1

Descriptive Statistics for Student Participants' Pre-Test

Variable	Mean (M)	Standard Deviation (SD)
Class	2.19	.808
Gender	1.54	.499
Grade	2.23	1.138
Hispanic/Latino(a)	1.97	.172
Race/Ethnicity	1.34	.914
GPA	2.32	1.075
Free/Reduced Lunch	1.21	.405
Family Structure	2.05	1.212
Like School	2.71	.884
Successful at School	2.87	.831
High Standards	2.72	.960
Clear Rules	2.91	.984
Teachers Respect Students	2.89	.962
Allow for Teaching	2.56	.924
Recognize Behavior	2.30	.895
Safety	2.22	.943
Adult Relationships	2.98	1.107
Care About Doing Well	4.40	.809
Pay Attention	3.97	.726
Class Preparedness	4.0420	.960
Student Interests	4.35	.838
School Usefulness	3.54	1.073
Importance as a Student	3.80	1.113

Appendix K

Descriptive Statistics for Students Participants' Post-Test

Table K1

Descriptive Statistics for Students Participants' Post-Test

Variable	Mean (M)	Standard Deviation (SD)
Class	2.12	.711
Gender	1.55	.498
Grade	1.95	1.114
Hispanic/Latino(a)	1.95	.212
Race/Ethnicity	1.29	.869
GPA	2.15	1.008
Free/Reduced Lunch	1.23	.422
Family Structure	1.95	1.054
Like School	2.58	.867
Successful at School	3.00	.736
High Standards	2.81	.812
Clear Rules	3.14	.843
Teachers Respect Students	2.81	.928
Allow for Teaching	2.53	.960
Recognize Behavior	2.27	.900
Safety	2.37	.905
Adult Relationships	2.96	1.044
Care About Doing Well	4.35	.895
Pay Attention	3.87	.817
Class Preparedness	3.8123	1.12970
Student Interests	4.27	.839
School Usefulness	3.40	1.048
Importance as a Student	3.70	1.120

Appendix L

Correlations for Scales on Student's Questionnaire

Table L1

Correlations for School Climate Scale

Variable	1	2	3	4	5	6	7	8	9.
1. Like School	1								
2. Successful at School	.359**	1							
3. High Standards	.219**	.285**	1						
4. Clear Rules	.173**	.256**	.385**	1					
5. Teachers Respect Students	.446**	.263**	.245**	.326**	1				
6. Allow for Teaching	.089*	.267**	.213**	.220**	.201**	1			
7. Recognize Behavior	.213**	.127**	.398**	.119**	.233**	.281**	1		
8. Safety	.363**	.275**	.270**	.341**	.400**	.270**	.293**	1	
9. Adult Relationships	.294**	.232**	.191**	.254**	.301**	.093*	.179**	.304**	1

**Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

Table L2

Correlations for Education Engagement Scale

Variable	1	2	3	4	5	6
1. Care About Doing Well	1					
2. Pay Attention	.497**	1				
3. Class Preparedness	-.151**	-.169**	1			
4. Student Interests	.348**	.278**	-.133**	1		
5. School Usefulness	.252**	.244**	-.074	.310**	1	
6. Importance as a Student	.396**	.269**	-.076	.275**	.453**	1

**Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

Appendix M

Teachers' Informed Consent Form

Johns Hopkins University

Homewood Institutional Review Board (HIRB)

Informed Consent Form for Teachers

Title:	*Using Classroom-Level Positive Behavior Intervention Supports in High School Science Classes*
Principal Investigator:	*Dr. Christine Eith, Professor at Johns Hopkins University*
Doctoral Student:	*Mrs. Briauna Knott Scott, M.A.Ed*
Date:	*January 2018*

PURPOSE OF RESEARCH STUDY:

The overall purpose of this research study is to examine classroom management practices among teachers in the science department. This will be done by building on the current school-wide PBIS approach by adding an additional 2 hours of professional development training for teachers in the Science Department, with the specific purpose of improving classroom management practices through a Classroom-Level Positive Behavior Intervention Supports (PCBS) approach.

PROCEDURES:

- Science and Engineering Teachers (treatment group) will be asked to participate in two professional development sessions on PBIS. Each session will be one to two hours long. These sessions will be held once in January and once in February.
- Treatment group teachers and Math department teachers (comparison group) will also be asked to complete a pre-survey and a post-survey on classroom management strategies and disruptive classroom behaviors at the end of the intervention. Each survey should take 15 minutes to complete.
- Following the initial professional development session, teachers will be asked to implement the preventive and reward classroom management strategies discussed during the session.
- The treatment group will meet monthly to review disciplinary data to track progress made for addressing problem behaviors.
- The researcher will also examine the aggregate number of positive acknowledgement tickets given by the teacher in each treatment class, the

aggregate number of disciplinary referrals given in each class (both groups), the aggregate number of suspensions given to each grade-level at three points: start of the intervention, end of the intervention, and compared to the end of the previous academic year. The quantitative data will be analyzed, and follow-up interviews will be conducted with treatment group teachers at the end of the intervention to better understand the experience of the teachers with this additional professional development, their comfort with using positive interventions over punishment, and considerations for continuing this intervention into future academic years.

- At the beginning and end of the intervention, students who were enrolled in science and engineering courses will be invited to complete a survey about their experiences over the course of the intervention. This survey is expected to take 15 minutes, and will address the students experience in the classroom, engagement with their learning, and perception of the school climate. This quantitative data will be analyzed, and follow-up teacher interviews and student focus groups will be conducted.

Title: Using Classroom-Level Positive Behavior Intervention Supports in High School Science Classes
PI: Dr. Christine Eith
Date: January 2018

RISKS/DISCOMFORTS: The risks associated with participation in this study are no greater than those encountered in daily life [or during the performance of routine physical or psychological examinations or tests]. This study is not meant to evaluate you and will not affect employment in any way.

BENEFITS:

Participating in this Classroom-Level PBIS study may lead to fewer office referrals, more instructional time, and improvements in school climate.

VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW:

Your participation in this study is entirely voluntary: You choose whether to participate. If you decide not to participate, there are no penalties, and you will not lose any benefits to which you would otherwise be entitled.

If you choose to participate in the study, you can stop your participation at any time, without any penalty or loss of benefits. If you want to withdraw from the study, please notify Briauna Knott Scott via email at bscott@jefcoed.com or via phone at 256-499-5266.

If we learn any new information during the study that could affect whether you want to continue participating, we will discuss this information with you.

CONFIDENTIALITY:

Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly, including members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the National Institutes of Health and the Office for Human Research Protections. (All of these people are required to keep your identity confidential.) Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

COMPENSATION: You will not receive any payment for participating in this study; however, your name will be entered in a drawing to win an incentive when you attend each PD session.

IF YOU HAVE QUESTIONS OR CONCERNS: You can ask questions about this research study now or at any time during the study, by talking to the researcher(s) working with you or by calling Dr. Christine Eith, the principle investigator at (240) 383-7505.

If you have questions about your rights as a research participant or feel that you have not been treated fairly, please call the Homewood Institutional Review Board at Johns Hopkins University at (410) 516-6580.

SIGNATURES

WHAT YOUR SIGNATURE MEANS:

Your signature below means that you understand the information in this consent form. Your signature also means that you agree to participate in the study.

By signing this consent form, you have not waived any legal rights you otherwise would have as a participant in a research study.

Participant's Signature Date

Signature of Person Obtaining Consent **Date**

(Investigator or HIRB Approved Designee)

Appendix N

Parental Opt-Out Form

Johns Hopkins University

Homewood Institutional Review Board (HIRB)

Parental "Opt Out" Form

Title:	**Using Classroom-Level Positive Behavior Intervention Support in High School Science Classes**
Principal Investigator:	*Dr. Christine Eith, Assistant Professor at Johns Hopkins University*
Date:	*December 21, 2017*

PURPOSE OF RESEARCH STUDY:

The purpose of this research study is to examine classroom management practices among teachers in the science department. This will be done by building on the current school-wide PBIS approach by adding an additional professional development training for teachers in the Science Department, with the specific purpose of improving classroom management practices through a Classroom-Level Positive Behavior Intervention Supports (PCBS) approach.

The goals of this research study are to (1) reduce classroom disruption and absenteeism, and improve student engagement in science courses, (2) increase student engagement and perception of school climate, and (3) increase teachers' willingness to employ positive behavior intervention over sanction and punishment in science classrooms.

We anticipate that approximately 700 students will participate in this study.

PROCEDURES:

Your students' math, science, or engineering teacher is participating in a Classroom Level Positive Behavior Intervention Support study. For this reason, your student will be asked to complete a 15-minute pre-survey at the beginning of the nine weeks and a 15-minute post-survey at the end of the nine weeks. The student may also receive incentive tickets and rewards from their teachers if they display appropriate behavior. At the end of the intervention, your student may be randomly selected to participate in a 20 to 30-minute focus group session in which he or she will provide feedback on how to improve the intervention for future nine weeks. Your student may also participate in an end of the

nine-week celebration for not receiving any disciplinary referrals.

RISKS/DISCOMFORTS:

The risks associated with participation in this study are no greater than those encountered in daily life [or during the performance of routine physical or psychological examinations or tests].

BENEFITS:

This study may benefit society if the results lead to a better understanding of student behavior and classroom management.

VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW:

Your student's participation in this study is entirely voluntary: You choose whether to allow your student participates, and we will also ask your student whether he or she agrees to take part in the study. If you decide not to allow your student to participate, [or your student chooses not to participate,] there are no penalties, and neither you nor your student will lose any benefits to which you would otherwise be entitled.

If you [and your student] choose to participate in the study, you [or your student] can stop participation at any time, without any penalty or loss of benefits. If you wish to withdraw your student from the study, or if he or she wishes to withdraw themselves, please contact Mrs. Briauna Scott at bscott@jefcoed.com .

If a decision to withdraw from the study would have any significant consequences for the participant, explain these consequences.

CONFIDENTIALITY:

Any study records that identify you or your student will be kept confidential to the extent possible by law. The records from your student's participation may be reviewed by people responsible for making sure that research is done properly, including members of the Johns Hopkins University Homewood Institutional Review Board and officials from government agencies such as the National Institutes of Health and the Office for Human Research Protections. (All of these people are required to keep your identity and the identity of your student confidential.) Otherwise, records that identify you or your student will be available only to people working on the study, unless you give permission for other people to see the records.

Instead of using your students' name, code numbers will be given to each participant, and data will be kept in a locked file cabinet.

COSTS

No costs are associated with this study.

COMPENSATION:

Your student will not receive any payment or other compensation for participating in this study; however, your student may receive incentives if his or her name is selected from a drawing.

IF YOU HAVE QUESTIONS OR CONCERNS:

You [and your student] can ask questions about this research study now or at any time during the study, by talking to the researcher(s) working with you [and your student] or by calling Mrs. Briauna Scott, student researcher, at (205) 379-4750 or Dr. Christine Eith, principal investigator, at (240) 383-7505.

If you [or your student] have questions about your student's rights as a research participant or feel that your student has not been treated fairly, please call the Homewood Institutional Review Board at Johns Hopkins University at (410) 516-6580.

SIGNATURES

WHAT YOUR SIGNATURE MEANS:

Your signature below means that you understand the information in this consent form. **Your signature also means that you DO NOT wish your student to participate in the study.** Your student will not be asked to participate in this study. By signing this consent form, you [and your student] have not waived any legal rights your student otherwise would have as a participant in a research study.

IF YOU PERMIT YOUR STUDENT TO BE IN THIS STUDY, DO NOT SIGN OR RETURN THIS FORM.

Student's Name

Student's Signature (if applicable) **Date**

Signature of Parent **Date**

Witness to Consent Procedures (if required by HIRB) **Date**

Appendix O

Tiger Tickets

Positive Behavior Intervention Support Tiger Ticket Presented to _____for ○ Attendance ○ Behavior ○ Academic Performance ○ Academic Engagement Presented By: _____ Date:_____ 	**Positive Behavior Intervention Support** Tiger Ticket Presented to _____for ○ Attendance ○ Behavior ○ Academic Performance ○ Academic Engagement Presented By: _____ Date:_____ 
Positive Behavior Intervention Support Tiger Ticket Presented to _____for ○ Attendance ○ Behavior ○ Academic Performance ○ Academic Engagement Presented By: _____ Date:_____ 	**Positive Behavior Intervention Support** Tiger Ticket Presented to _____for ○ Attendance ○ Behavior ○ Academic Performance ○ Academic Engagement Presented By: _____ Date:_____ 

Appendix P

Sample Consequence Paragraphs

Tardy Paragraph

I _____ am handwriting these paragraphs due to my excessive tardiness to _____class. I understand that this behavior is unacceptable and disruptive to the learning environment at the start of class. I understand that when I am late, I must enter quietly, sign the tardy folder, go to my seat, and begin the lesson without interrupting. I also need to get to class on time in order to prepare for the real world with getting to work on time.

Disruptions Paragraph

I _____am handwriting these paragraphs due to my disruptive classroom behavior. I understand that insulting my peers unapologetically or joking, or arguing with a classmate interfered with the learning environment. This behavior is unacceptable, and I must be accountable for my actions. I also need to exhibit self-control which will help me be able to work well with others in the real world in my future career.

Appendix Q

Table Q1 *Summary Matrix*

Research Question	Outcome	Variable	Data Source
What is the effect using classroom-level PBIS on students' (a) incidences of disruptive classroom behaviors, (b) educational engagement, (c) academic performance, (d) suspensions, (e) school climate, (f) tardiness?	Students incidences of disruptive classroom behaviors, tardiness, and number of suspensions will decrease. Student educational engagement and academic performance will increase. Students perceptions of school climate will improve.	Number of Disruptive behaviors	Researcher Developed Teacher Questionnaire (Pre & Post Test)
		Educational Engagement	Child Trends for the Flourishing Children Project
		Academic performance	Academic Performance Sheet
		Number of Suspensions	Graduation Tracking System/INow Database Analysis System
		Tardiness/Attendance	Teachers' Attendance Report
		School Climate	La Salle, T. P., McIntosh, K., & Eliason, B. M. (2016)
What is the effect of using classroom-level PBIS on teachers' (a) number of disciplinary referrals written and (b) level of preparedness?	The number of disciplinary referrals written will decrease.	Number of disciplinary referrals	Researcher Developed Teacher Questionnaire (Pre & Post Test)
	Teachers' level of preparedness for classroom management will increase.	Level of preparedness	Researcher Developed Teacher Questionnaire (Pre & Post Test)
What is the effect of using classroom-level PBIS on teachers' use of (a)	Teachers' use of preventive and reward strategies will increase and their use of initial	Frequency use of preventive classroom management strategies	Researcher Developed Teacher Questionnaire (Pre & Post Test)

preventive classroom management strategies, (b) initial correction strategies, (c) reward strategies, and (d) later correction strategies?	correction and later correction strategies will decrease.	Frequency use of reward strategies Frequency use of initial correction strategies Frequency use of later correction strategies	Including items from Survey of Behavioral Management Practices (SOBMP) (Woodcock & Reupert, 2013)
Was there a difference in number of disciplinary referrals written between teachers exposed to using classroom-level PBIS and teachers not exposed to using classroom-level PBIS?	The teachers in the treatment group will write fewer disciplinary referrals in comparison to teachers in the treatment group.	Number of disciplinary referrals	Researcher Developed Teacher Questionnaire (Pre & Post Test)
What were the participating teachers and students' experiences with classroom-level PBIS?	Teachers and students will experience an improved school climate.	Teachers' Perceptions	Interview Protocol

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EDUCATION

Johns Hopkins University Baltimore, MD
Doctor of Education in Urban Leadership **Expected August 2018**

- Merit Based Scholarship Recipient Fall 2015-Present

The University of Alabama at Birmingham (UAB) Birmingham, Al
Master of Art Degree in Secondary Education April 2014
Bachelor of Science in Biology May 2012

- Phi Sigma Biological Honor Society Spring 2011
- Global and Community Leadership Honors Program Fall 2010
- Aaron Lamar Jr. Scholarship Recipient Fall 2010
- National Society of Collegiate Scholars Spring 2010

WORK EXPERIENCE

Minor High School Adamsville, Al
Teacher Fall 2015-Present

- Prepare and deliver lessons for General Biology, Advance Anatomy and Physiology, Advance Placement Biology, and Advance Biology courses
- Differentiate instruction based on students' learning styles
- Manage misbehavior and counsel students
- Communicate with parents, coaches, and case managers regarding students' progress
- Attend faculty and leadership team meetings
- Provide timely feedback to students based on their academic progress

Anniston High School Anniston, Al
Teacher Fall 2013-2015

- Prepared and delivered lessons for General Biology courses
- Differentiated instruction to meet the needs of students with various learning styles
- Maintained accurate records of students' work
- Provided timely feedback to students regarding their progress in the course
- Utilized technology in the classroom to facilitate learning
- Facilitated inquiry based biology labs
- Collaborated with special education teachers to make accommodations for students with learning disabilities
- Managed the classroom to ensure that the environment is conducive to learning

- Supervised the behavior of students during assigned duty times
- Mentored and counseled students
- Communicated with parents regarding student's progress
- Volunteered as an after-school Science tutor
- Attended faculty meetings, parent conferences, open house, community events, and any other events deemed necessary by the principal
- Completed any other additional tasks deemed necessary by the principal

UAB CORD/McWane Science Center Birmingham, Al
LAB Works Facilitator Fall 2012-Spring 2013

- Facilitated labs for middle school and high school students
- Taught labs that involve physics, anatomy, general biology, and environmental science

LEADERSHIP EXPERIENCE

Minor High School Adamsville, Al
Academic Leadership Team Fall 2017-Present

- Collaborated with department chairpersons to develop a new lesson plan template for faculty
- Worked with team members to assess academic issues and develop potential solutions to problems to relay to administrators
- Determined the observation evaluation rubrics that will be used to assess teachers
- Determined the teaching standards that need to be addressed during professional development sessions

Minor High School Adamsville, Al
Science Department Chairperson Fall 2016-Present

- Facilitated science departmental meetings
- Acted as a liaison between science teachers and administrators
- Facilitated professional learning communities for science literacy design collaborative
- Observed science teachers and provide them with feedback regarding classroom management skills and academic engagement skills

Minor High School Adamsville, Al
Assistant Varsity Cheer Coach Fall 2016-Spring 2018

- Attended cheer camp and cheer competitions with cheerleaders
- Supervised after-school cheer practices and fundraiser events
- Supervised cheerleaders at football games and basketball games
- Assisted with organizing pep-rallies and other spirit events
- Maintained an official budget and keep an accurate account balance for all cheerleaders

Anniston High School Anniston, Al
Science Department Chairperson Fall 2014-Summer 2015

- Acted as a liaison between the administration and science teachers
- Attended department chair meetings and facilitate science departmental meetings
- Communicated with science teachers about the effectiveness of the science courses being taught
- Collaborated with department members to implement effective strategies for science classes
- Observed and evaluated all science teachers

Anniston High School Anniston, Al
Re-entry Committee Member Fall 2014-Summer 2015

- Attended conferences to evaluate whether or not a student should be allowed to return to school after dropping out or being expelled
- Discussed alternative routes for students to take if they are not allowed to return to school

Anniston High School Anniston, Al
Leadership Team Committee Member Fall 2014-Summer 2015

- Collaborated with colleagues to re-evaluate current school policies and to implement any new policies

Anniston High School Anniston, Al
Continuous Improvement Plan Committee Member Fall 2014-Summer 2015

- Collaborated with colleagues to holistically discuss the needs of the school
- Analyzed data results from the PLAN test and ACT to assess the professional development needs of the faculty to improve students' performance on standardized tests
- Created a plan for increasing parental involvement and culture competency in the school
- Evaluated the curriculum currently being offered and modified it accordingly

Anniston High School Anniston, Al
Advancement via Individual Determination (AVID) Site Team Member 2013-2015

- Implemented AVID strategies such as Cornell Note-Taking, Learning Logs, and Interactive Science Notebooks in Biology courses
- Created an AVID Site Team Plan with other team members
- Interviewed and selected students to be in the AVID program
- Attended meetings and conferences concerning the AVID program
- Evaluated the AVID elective students' performance and provided them with support
- Chaperoned the students on college visits

Anniston High School Anniston, Al
Positive Behavior Support Committee Member Fall 2013-Summer 2015

- Provided teachers with reward tickets to give to students when they are doing something good
- Spoke to students during assemblies about good behavior
- Awarded students with gift cards during positive behavior support assembly

Anniston High School Anniston, Al
ABC Committee Member Fall 2013-Summer 2015

- Utilized a Graduation Tracking System to view data concerning students' attendance, behavior, and academic performance
- Attended meetings to create an intervention plan for students who exhibit risk factors
- Mentored students who need additional support to attend school, behave appropriately, and perform academically
- Attended "Getting to the Finish Line" Conference hosted by Johns Hopkins University School of Education

Rast Hall Birmingham, AL
Resident Assistant Spring 2011-Spring 2012

- Managed duties such as maintenance requests, room transfer forms, room inventories, health and safety inspections, and incident reports
- Created door decorations and design informative bulletin boards for residents
- Coordinated diversity, educational, social, and community service programs
- Counseled residents on academic, personal, and social issues
- Acted as a liaison between floor residents and the residential life coordinator
- Greeted guests and provided effective customer service while working desk shifts

Alpha Kappa Alpha Sorority, Inc. Birmingham, AL
General Member Spring 2013-Present
Iota Phi Chapter Member Fall 2010-Fall 2012

- Vice President of the Iota Phi Chapter Fall 2011-Spring 2012
- Global Poverty Committee Chair Spring 2011
- National Pan-Hellenic Council Delegate Spring 2011

Leadership and Service Council at UAB Spring 2010-Spring 2012

- Leadership Chair Spring 2011-Spring 2012
- Retreats Committee Co-Chair Spring 2010-Spring 2011

RESEARCH EXPERIENCE

Johns Hopkins University School of Education Baltimore, MD
Doctoral Candidate Fall 2017-Present

- Implemented dissertation research intervention study at Minor High School to address behavior issues in science classes
- Dissertation research study titled: Using Classroom-Level Positive Behavior Intervention Supports in High School Science Classes

Minority Health and Health Disparities Research Center (MHRC) Birmingham, Al
Intern Summer 2012

- Won an Honorable Mention Award in the category, Public Health and Social & Behavioral Sciences II for my project entitled, "HIV Knowledge in African American Adolescents in the Black-Belt"

UAB Global and Community Leadership Honors Program Birmingham, Al
Honor Student Fall 2010-Spring 2012

- Completed undergraduate senior thesis/project entitled Exploring Educational Issues in Alabama and Taking a Closer Look at Innate vs. Skilled Ability in Learning Various Subjects and Effective Strategies to get Students Motivated Again

Minority Health and Health Disparities Research Center (MHRC) Birmingham, Al
Intern Summer 2011

- Awarded first place in the Year 2 MHRC Summer Enrichment Program's Research Poster Presentation Competition- Explaining Racial Disparities in Adolescent Depression: The Role of Individual, Family, and School Factors
- Achieved a certificate of promotion to return for summer 2012

Minority Health and Health Disparities Research Center (MHRC) Birmingham, Al
Intern Summer 2010

- Sketched a Career Roadmap poster and presented at the MHRC Summer Enrichment closing ceremony
- Developed a scientific abstract while attending a Scientific Writing course
- Studied other cultures and societies and improved my public speaking and presentation skills during a Cultural Competency Course
- Communicated with health professionals while visiting schools to learn about various career options

VOLUNTEER EXPERIENCE

- Salvation Army Soup Kitchen-3 hours Fall 2017
- Domestic Violence Awareness Clothing Drive-4 hours Fall 2017
- Breast Cancer Awareness Program-2 hours Fall 2017
- Abundant Life Church Adopt-A-Child for Christmas-6 hours Fall 2017
- American Red Cross Blood Drive-2 hours Spring 2017
- Project Homeless Connect-5 hours Spring 2017
- Minor Parkway Clean-up for MLK Day of Service-8 hours Spring 2016

- Adopt-A-Road Clean Up in Birmingham-6 hours Fall 2015
- Hosted Anger Management Sessions for the Legacy Club-4 hours Fall 2014
- Sickle Cell Anemia Foundation Monetary Collections-2 hours Fall 2014
- Red Cross Blood Donation-2 hours Summer 2014
- Assisted with Anniston Country Club Golf Tournament for the Red Cross Summer 2014
- Advanced Anatomy Laboratory Coordinator-35 hours Summer 2013
- Teaching Assistant for Advanced Human Anatomy 50 hours Spring 2013
- Blue Prints College Access Initiative Mentor-25 hours Fall 2012-Spring 2013
- Best Buddies-45 hours Fall 2012-Spring 2013
- Martin Luther King Day of Service-12 hours Spring 2010-Spring 2013
- Iota Phi Chapter of Alpha Kappa Alpha Sorority, Inc. -50 hours Spring 2011-Spring 2012
- Down the Alley Day of Service-12 hours Fall 2010-Fall 2012
- Into the Streets Day of Service-16 hours Fall 2009-Spring 2012
- Civic Engagement Volunteer Activities-16 hours Fall 2009-Spring 2012
- Birmingham's Project Homeless Connect-12 hours Spring 2010, 2011, 2012
- Summer Service Weekend to Rainsville, Alabama-8 hours Summer 2011
- Alternative Spring Break Trip to New Orleans, Louisiana-35 hours Spring 2011

PROFESSIONAL DEVELOPMENT EXPERIENCE

- Red Mountain Writing Project Training Fall 2017
- Literacy Design Collaborative Training Summer 2015-Present
- Department of Human Resource Child Abuse Training Fall 2014
- Technology Clicker Training Fall 2014
- BioTeach Sickle Cell Anemia Lab Training Fall 2014
- Reading and Writing Standards Training Fall 2014
- Science College and Career Readiness Standards Training Fall 2014
- Differentiated Instruction Training Fall 2014
- LINCs Vocabulary Training Fall 2014
- Anniston City Schools 21st Century Classroom Training Summer 2014
- Alabama Science In Motion Level I Biology Training Summer 2014
- BioTeach Program Graduate Summer 2014
- Effective QuestioningTraining Spring 2014
- Alabama Insight Tools Training Spring 2014
- Formative Assessment Training Fall 2013
- AVID Writing, Inquiry, Collaboration, Organization, Reading (WICOR) Fall 2013
- Cornell Note Taking Training Fall 2013
- Alabama Reading Initiative Content Literacy Training Fall 2013
- Professional Skills for Educators Certificate Program Spring 2013

PROFESSIONAL AFFILIATIONS

- Jefferson County Education Association Member — Fall 2015-Present
- Alabama Education Association Member — Fall 2013-Present
- National Education Association Member — Fall 2013-Present
- Local Area Education Association Member — Fall 2013-Present
- National Teaching Association Member — Fall 2013-Present